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R. Ottofengul, M.D.S., D.B.S., EL.D. Editor 80 West 40th \$t. New York



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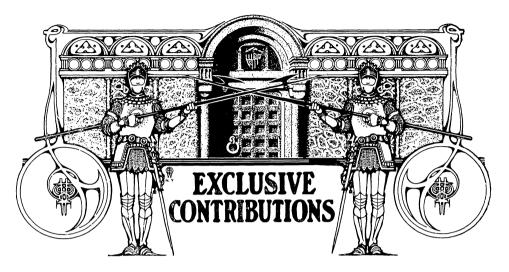
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DR. JOSEPH P. ROOT



Protection from the Roentgen Ray.

By C. EDMUND KELLS, D.D.S., New Orleans, La.

When the younger X-ray operators of to-day look back and observe what fearful consequences were the results of the exposure to the unknown dangers of the ray, whereby very many of the original investigators suffered the loss of fingers, arms, hands, and even their lives in some instances, they have great cause to rejoice that the dangers were discovered and means to overcome them devised before they came upon the scene.

Just as many persons are sensitive to some special drugs, some are extremely so as to the effects of the Roentgen ray; while others are comparatively immune.

Fortunately for the writer, he was included amongst the latter class, else he would not be driving a pen at this moment.

Naturally, from the very nature of the work, the ill effects of which we speak were some time in developing and being recognized, but once they became evident steps were taken to render the patient and operator safe.

It gradually became known that the rays evolved by the Crooke's tube are of various kinds; that those possessing the highly penetrating qualities necessary for work are less dangerous that those which are less penetrating, and the latter are called the "soft" rays.



It was also discovered that glass free from lead is readily penetrated by all the rays, while that which contain a small quantity of lead is highly opaque to them. Consequently the placing of the tubes in lead glass globes, as shown in Fig. 1, would cut off all the rays which it would intercept.

While black rubber is practically transparent to the rays, red rubber is very opaque, so impervious rubber shields were also devised which enclosed the tube for its entire circumference, save for an opening sufficiently large for the passage of the necessary rays (Fig. 2).

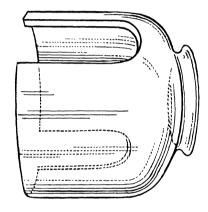


Fig. 1.

Gloves were also made of this same material, whereby the hands of the operator could be protected (Fig. 3).

Improvements in the generating apparatus and tubes were so vast that pictures were taken in seconds, where earlier operators used minutes, and thus again the dangers were minimized.

It was also learned that certain substances, for instance, thin aluminum, leather, cotton wool, and possibly others of which I do not know, while readily allowing the passage through of the high-powered or "hard" rays, absorbed or cut out the soft rays; consequently the interposition of any one of these substances between the tube and the patient would protect the patient, while at the same time they would not interfere with the efficiency of the X-rays.

Of course, we are now speaking of *protection* in the ordinary use of the rays. Undoubtedly ill effects can be caused even under these conditions, if very prolonged exposures are repeatedly made.



In hospitals and other places where the operator would naturally be exposed for several hours a day, the most perfect systems of self-protection are now used. As a rule, the tube is enclosed in a lead glass chamber, previously referred to, containing an opening for the passage of the rays, and this opening is covered with a "screen" of thin aluminum, leather, or cotton wool.

In addition to the protection afforded by the lead glass globe, the operator usually stands behind a partition lined with sheet lead of suf-

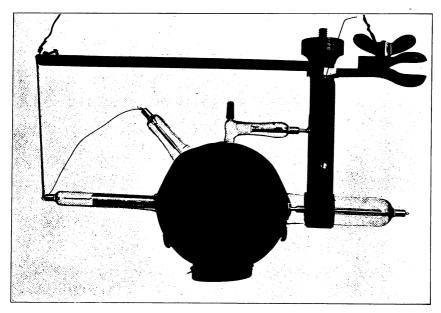


Fig. 2.

ficient thickness to render it absolutely X-ray proof, and in this a small window is cut, through which the operator can observe the patient and his tube.

You will note that the operator is *less* careful of his face than of any other part of his body, and well he may be, for it is a well-known fact that none of the earlier operators ever had to walk the floor o' nights trying to quiet squalling babies (of their own).

In ordinary dental offices such extreme protection should hardly be considered necessary, and yet all the precautions which are really necessary, it is feared, are not always used.

In good faith I adopted the impervious rubber shield and gloves, believing them to be impervious as represented, and it did not occur to



me to test them. But some time ago such tests were suggested to me, and imagine my surprise upon obtaining a picture of the fingers, as shown in Fig. 4, right through one of these protecting gloves, and with only five seconds' exposure!

Pictures were also obtained through the impervious shield surrounding the tube.

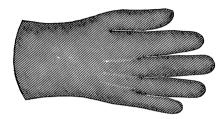


Fig. 3.

However, these pictures were taken close to the tube, and there is no doubt but that one's exposure at several feet from the tube to the faint rays that penetrate the cover, for the short period that the tube need be operated for dental skiagraphs, would be harmless.

If, however, the operator proposes to do experimental work of such a nature as would require him to be under the influence of these rays, faint as they are, for any length of time, it would be undoubtedly more prudent for him to use either a lead lined partition or lead lined apron. But the operator should be most careful not to expose his bare hands to the ray, however weak. It is decidedly best to err on the safe side here, and the glove, under these circumstances, would probably *protect*.

If a fluoroscope is used the handle should be protected by a lead guard.

Under no circumstances should the operator risk holding the film in the patient's mouth, either with or without gloves. When the patient cannot hold it, some sort of film holder should be used.

The reason why it may be safe for the patient to hold it, and not the operator, is because the effects of the ray, to a certain extent, are *cumulative*.

If every known precaution has been taken to protect the patient and a "burn" occurs, the operator would naturally be acquitted of all blame; but let the least bad effects appear, and let it be known that a filter were not used, then the operator would certainly be held culpable.



From these experiments and what we have learned from past experience we may *probably* conclude that the dental operator may operate his tube with safety to himself when he is exposed but a *few seconds* a day, provided he encloses his tube with either the lead glass or rubber envelope.



Fig. 4.

That in order to insure safety to his patients he *must* use a filter or screen as described, for the writer has met with one patient so susceptible that an exposure of only five seconds produced a slight dermatitis. This was, of course, in the earlier days and before a screen was adopted.



Dental Radiography.*

By Howard R. Raper, D.D.S.,

Professor of Operative Technic and Roentgenology at Indiana Dental College,

Indianapolis.

Che Danger of the X-Rays.

CHAPTER VIII—Continued.

Knowing now the dangers of the X-rays, how shall we protect ourselves and our patients against them? We shall protect ourselves by never exposing any part of our bodies to the direct or primary X-rays, and our patients by exposing them as short a time as possible.

How can we do radiographic work without exposing ourselves to the X-rays?

Sheet lead one-eighth inch thick is opaque to very penetrating X-rays. Lead glass—a transparent glass containing a great deal of lead silicate—though it would need to be "about two inches thick to totally obstruct very penetrating X-rays," nevertheless offers considerable, and perhaps sufficient, protection in the thickness of one-quarter inch.

The writer was informed that linoleum is opaque to the X-rays. To test the verity of this information Figs. 311, 312 and 313 were made. A study of the illustrations will show that, compared to lead or lead glass, linoleum offers very little resistance to the rays; compared to wood, the resistance is much greater. White linoleum offers more resistance than red, green or blue.

The appliances which may be used for protection against the X-rays are: Protection lead screens (Figs. 314 and 315), protection lead cabinets (Figs. 316 and 317), protection shields for the tube (Figs. 60, 61, 63 and 64, Chapter III, and Fig. 318), protection or safety X-ray tubes (Fig. 319), X-ray proof gloves (Fig. 320), lead glass spectacles (Fig. 321), and protective aprons.

From the standpoint of protection for the operator nothing is so efficient as the lead screen or cabinet (Figs. 314, 315, 316 and 317). The use of either makes it possible for the operator to protect himself completely from all direct X-rays.

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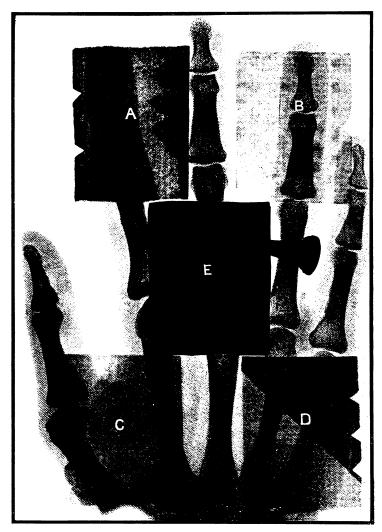


Fig. 311.

Fig. 311. A, B, C, and D are pieces of linoleum. E, a piece of sheet lead 1-16 inch thick

The lead used in protective screens and cabinets is usually one-six-teenth inch thick. Lead of this thickness does not totally obstruct very penetrating X-rays when the tube is brought close up to it, but at the usual distance of several feet between tube and screen it is doubtful if any X-rays penetrate the latter.



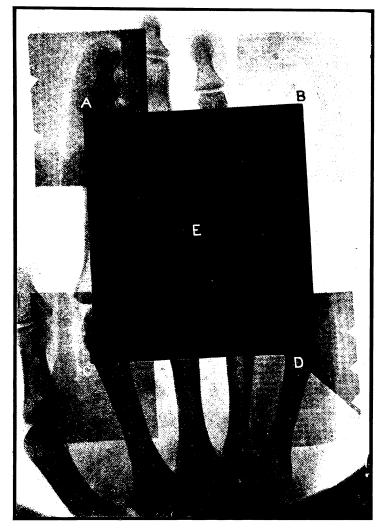


Fig. 312.

Fig. 312. A, B, C, and D, same as in Fig. 311. E, a piece of lead glass 1-4 inch thick

The lead glass used in the windows in protection screens and cabinets is usually one-fourth inch thick. With the tube placed in close proximity to the screen, lead glass of this thickness is highly translucent to the X-rays, but with the tube a distance of several feet the rays penetrate the glass but feebly.



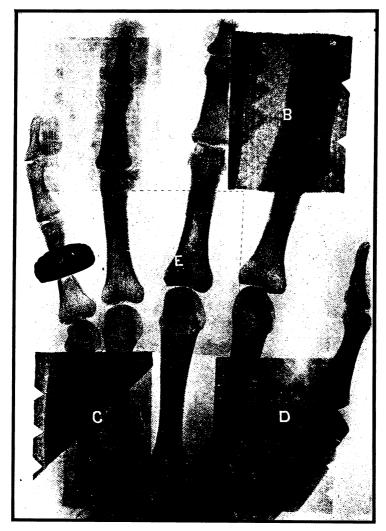


Fig. 313.

Fig. 313. A, B, C, and D, same as in Fig. 311. E, the dotted lines outline the position of a piece of pine wood 1-2 inch thick

Instead of the lead glass window a screen may be covered entirely with lead and mirrors so arranged that the operator may observe his tube and patient from his position back of the screen.

Let it be clearly understood that the man standing behind a lead screen is not completely protected from all X-rays. If the tube is rather



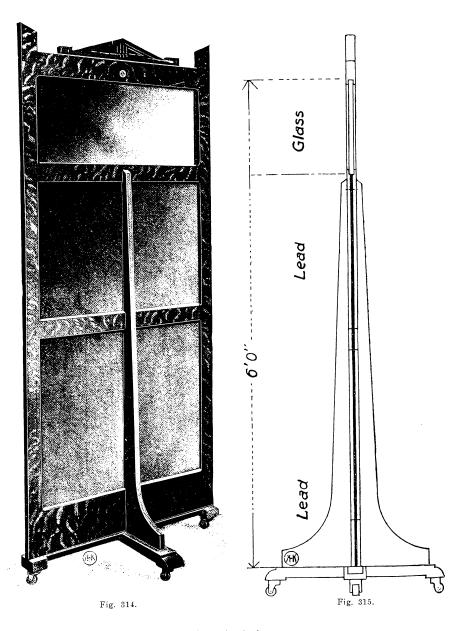
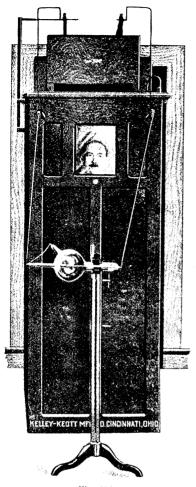


Fig. 314. Protective lead screen

Fig. 315. Protective lead screen, sectional view





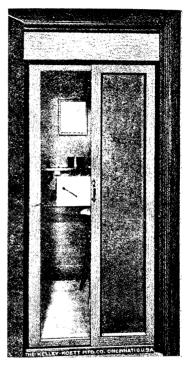


Fig. 316.

Fig. 317

Fig. 316. Protective lead cabinet Fig. 317. Protective lead cabinet

close to the screen some of the X-rays may penetrate it—becoming extremely feeble, however, by the time they make the penetration—and he is, of course, exposed to the secondary, tertiary and other sets of feeble rays which fill the room like light. But he is completely protected from the powerful dangerous rays.

The protective lead screen, or cabinet, or their equivalent, is a necessity in the practice of modern radiography.

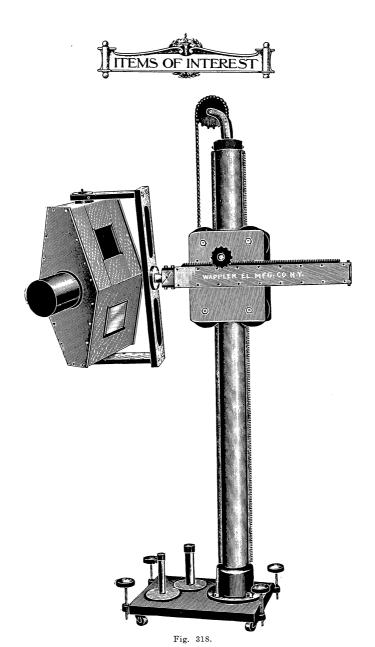


Fig. 318. Protective tube shield and stand

Protection Shields.

Protection shields are of three varieties: those made of lead glass (Figs. 60, 61 and 63, Chapter III), those depending on a sheet of metallic lead for their action (Fig. 64, Chapter III), and those made of rubber impregnated with lead or a salt of lead (in appearance similar to



Fig. 64). The X-ray tube fits into the protection shield, which latter protects the patient to a great extent against the action of all X-rays except those which pass through the window of the shield and are being used to make the radiograph. As a matter of fact, the patient does not need this protection in the practice of dental radiography, but it is not inexpedient to use even protective measures that are thought to be unnecessary. The operator is also protected in a degree by the protective shield.

A protection shield calculated to take the place of a lead screen or cabinet is illustrated in Fig. 318. The protective material used is, I judge-

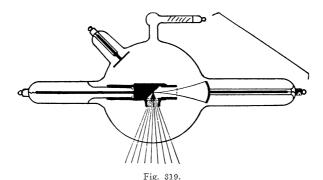


Fig. 319. Protection or safety, X-ray tube

from its appearance, rubber impregnated with lead or a salt of lead. The manufacturers claim to use a German preparation, the formula of which is not divulged. This material is more opaque to the X-ray than lead glass, less opaque than metallic sheet lead.

Protection X-Ray Cubes.

Protection or safety X-ray tubes are manufactured, some of lead glass save for a window of ordinary glass transparent to the X-rays, and some with an internal protective arrangement which allows the

X-rays to be given out from the tube from a limited place or spot only (Fig. 319).

Gloves. Fig. 320. The hands of the operator may be protected with X-ray proof gloves. These gloves are usually made of rubber impregnated with lead or some salt of lead. Protective gloves may be made by painting ordinary

leather gloves with several coats of white lead. X-ray proof or "opaque" gloves, as they are called, are not really opaque to X-rays; they are, in fact, quite translucent to powerfully penetrating rays.

Gloves should be used when the operator finds it necessary to hold the film in the patient's mouth himself. Seldom, very seldom indeed, is



it necessary for the operator to do this, and I warn you against the practice with the same feeling that I would cry "Don't!" if I should see you making a plaything of a culture of the bacillus of the white plague.

Protection lead glass spectacles may be used to spectacles. protect the eyes (Fig. 321). Not because the eyes are any more susceptible to the ill effects of the X-rays than the skin of the face, but because injury to them is such a serious matter. Operators suffering from chronic dermatitis of the face usually suffer also impairment of vision.





Fig. 320.

Fig. 321.

Fig. 320. X-ray proof, or aque, or protection gloves
Fig. 321. Lead glass spectacles

Protection
Apron.

Protection aprons of lead-impregnated rubber may be purchased from manufacturers of X-ray supplies. They are used to prevent sterility.

Protection gloves, spectacles and aprons are obviously not needed so long as the operator remains behind a screen.

Efficiency of Protective Measures.

Having now told you of the dangers of the X-rays and shown what measures have been adopted to prevent disaster, the question arises, Have these modern means of protection proven efficient?

So far as I know, no man who has conscientiously and consistently stayed behind a protective lead screen, or in a lead cabinet, has developed either cancer or dermatitis or sterility, or suffered or experienced any other pathological change which could be attributed to the X-rays. And some have been engaged in the work for as long as twelve years.

The severe and fatal cases of dermatitis and cancer have occurred in patients who received prolonged and repeated X-ray treatments for some disease, and in pioneer operators.

As practitioners of dental radiography, we will never be called upon



to make such exposures of our patients as are necessary when the X-rays are used as a therapeutic agent.

The pioneer operators whose lives were ruined and destroyed by the X-rays did not protect themselves at all, not knowing that it was necessary. Even without any protection disaster did not manifest itself immediately, as might be imagined. Men worked for months and even years before any trouble developed. Take the case of a well-known manufacturer of X-ray tubes, for example. He exposed himself two or three hours daily, six days in the week, for a little over a year before he noticed any dermatitis. It must be remembered, however, that at that time the machines and tubes could not generate near the same number of Xrays that the improved machines and tubes of to-day can, and the danger was therefore less.

Efficiency of Slight Protection.

As an example of how efficient even slight protection is, Dr. Porter cites a case of dermatitis of the hands, save for the skin protected by a broad gold ring, which remained perfectly normal. The immunity which even light clothing offers is shown by the rarity or slight degrees of dermatitis above the cuffs, or on the other parts of the body protected by clothing.

Before it was known to be dangerous, operators formed the habit of using their hands for penetrometers—observing them through the fluoroscope to learn the power of penetration of the X-rays. This practice has doubtless caused many cases of dermatitis and cancer of the back of the hands. The use of any penetrometer save those of an improved type which enable the operator to "look around a corner" necessitates the exposure of the operator, especially his hands, to the rays, and I object to their use for this reason.

Summarv of Danger to Operator.

Summarizing the danger to the operator, we may say simply this: If he will observe strictly the rule to remain behind a lead screen or in a lead cabinet he may work for a period of ten or twelve years in safety. What the dangers of exceeding this time

limit are we do not know. Perhaps there are none. Perhaps all the older X-ray operators will die of leukemia within the next ten years. can say? We are entitled to our opinions, but no one really knows. pioneers in the work are still in danger; we who follow are comparatively safe.

Though the operator need never expose any part of his body to any except the weak, harmless X-rays which fill the room, it is necessary to expose at least that part of the patient being radiographed to the direct rays. The question arises, how long may we expose the patient with



perfect safety without any danger whatever of producing acute dermatitis? Authorities are very reluctant to set this time limit.

The very few cases of serious acute dermatitis due to exposure for radiographic work occurred when the outfits used were so small that the time of exposure reached thirty minutes and longer. Compare such exposures with those of to-day, which range from a fraction of a second to only one minute at most, even with the sfall suitcase outfits, and the improbability of producing dermatitis will be appreciated.

The first rule regarding the exposure of patients should be, never expose the patient longer than absolutely necessary.

Cime Limit for Exposing Patents.

And now I shall place myself in line for criticism by authorities, by setting a time limit of exposure of the patient. Even with the smallest apparatus, and where a number of exposures are neces-

sary, the aggregate time of exposure need not and should not exceed two minutes. If it is necessary to use this full time, two minutes in one day, then do not expose the same part of the same patient for a week or ten days. Give the skin a chance to recover from any change produced in it, and so guard against a cumulative effect of the X-rays. I cannot imagine a case in dental radiography which would require an exposure longer than two minutes. And seldom, indeed, will it be found necessary to expose the patient, even in the aggregate when several radiographs are made, as long as the time limit set.

Two minutes is a conservative limit—in fact, a five-minute exposure would in all probabilities prove harmless—but keeping inside of it, we may have the assurance that, except in a case of most extraordinary susceptibility, amounting to positive idiosyncrasy, nothing more than a very slight acute dermatitis, no worse in its effect on the health and happiness of the patient than a mild case of sunburn, could possibly occur. And even this slight acute dermatitis is so extremely unlikely to occur that the careful operator need never expect to see it.

Summary of Danger to Patient.

Thus I may say, so far as the patient is concerned, X-rays are perfectly harmless if the operator The danger to patients from infection is careful. by instruments is infinitely greater than the danger from the sensible use of the X-rays for radiographic purposes.

"In the early days of the X-rays there was a tendency to attribute X-ray burns, not to the X-rays themselves, but to some accompanying factor, the exclusion of which would prevent the occurrence of X-ray burns."* Thus it

^{*}Pusley and Caldwell, "Roentgen Rays in Therapeutics and Diagnosis."



was suggested that burns were due to an electrical condition surrounding the tube; to chemical conditions surrounding the tube; to bacteria being carried into the tissues by the X-rays; to violet rays, and so on. It is generally conceded to-day, however, that X-ray burns are the result of a specific action of the X-rays themselves on the tissues.

There is a popular theory that for X-rays to have an effect on the skin they must be absorbed by it. Thus, the more penetrating X-rays which pass completely through the derma are less likely to produce dermatitis than rays of less penetration—just enough penetration to be absorbed. Knowing this theory—a theory the writer receives with skepticism—we will now consider the use of a filter.

First, however, let us dwell on some points which were not touched upon in Chapter III, when we discussed the generation and nature of X-rays. It was stated in Chapter III that the X-rays from a tube of high vacuum were the most penetrating—that the penetration of the X-rays varied directly according to the degree of vacuum of the tube. Thus the X-rays from a high vacuum tube are very penetrating, the rays from a medium vacuum tube of medium penetration, and the rays from a tube of low vacuum, of low penetration. While this is true, there is something further to be said. Take the high vacuum tube: while most of the direct X-rays given off from it are of high penetration, some rays of medium and low penetration are also generated. While the tube of medium vacuum generates X-rays of medium penetration principally, some rays of high and low penetration are also generated; and though the X-rays from a tube of low vacuum are by far mostly of low penetration, some few rays of medium and high penetration are given off also.

Since the tube of a high vacuum is the one we use in radiographic work, let us enumerate the different sets of X-rays given off from such a tube. First, are the direct rays of high penetration—these are by far the most numerous; next, the sets of direct X-rays of medium and low penetration—these are comparatively few in number; then secondary X-rays given off from the glass of the tube; and last, if there is any inverse current in the tube, the rays generated by it.

If now the theory of absorption for effect is correct, then it is desirable to expose the patient only to the direct penetrating X-rays, and not to any of a less penetrating nature. In an effort to gain this end the filter is used.

Filters are made of wood, aluminum, leather and various other materials. For example, a piece of sole leather (no definite thickness) is placed over the window of the tube shield. The X-rays from the tube pass through it before striking the patient and the leather filters out, ab-



sorbs, all (?) of the weaker rays, which might otherwise be absorbed by the skin, and so guards against dermatitis.

The danger of producing dermatitis varies directly according to the number of X-rays which strike the part. Recollect that X-rays emenate from a point, traveling in diverging lines. Thus the greater the distance between the target and the skin the fewer rays strike the latter and the less danger of dermatitis. When the tube is brought very close (within three or four inches) to the part and no filter is used the skin is then acted upon not only by a much greater number of the direct penetrating rays, but also by the softer direct rays and by the secondary rays from the glass of the tube, so increasing the danger of burning materially. Thus it will be seen that the use of the filter permits the operator to place the tube close to the patient, so that his film or plate is within range of a greater number of penetrating direct rays, and at the same time protects the patient against the soft rays. (See summary of the conditions under which Fig. 121 was made, Chapter V.)

Theoretically, the use of the filter should aid in obtaining a clear radiograph by cutting out all save the direct penetrating rays. It is not as efficient in this respect, however, as the compression diaphragm. (Figs. 60 and 66.)

The number of direct X-rays generated by a given tube varies directly according to the number of milliamperes sent through it. Thus danger of dermatitis also varies directly according to the number of milliamperes sent through the tube. To elucidate: the distance between the tube and the skin remaining the same, an exposure of one minute with ten milliamperes passing through the tube will have practically the same physiologic effect as an exposure of two minutes with five milliamperes passing through the tube.

There is no such thing known as either acquired or natural immunity to the action of the X-rays. Some are more susceptible than others, but no one is immune. Blondes are reputed to be more susceptible than brunettes. One burn greatly predisposes to another.

Creatment of Houte X-Ray Dermatitis.

The careful practitioner of dental radiography, unless he meets a case of idiosyncrasy, will never have occasion to make use of knowledge regarding the treatment of acute X-ray dermatitis. It is well, however, to have the knowledge even though we are

never called upon to use it. The most important thing to know concerning the treatment of acute X-ray burns may be learned from the nursery rhyme about "Little Bo-Peep" and "her sheep." "Let them alone." So



many durgs aggravate the condition that their use is contraindicated. A normal salt solution is, perhaps; the best wash and may be used freely.

There will be men in our profession who will not take up radiographic work, and who will say as an excuse for not doing so that they believe the work "too dangerous." Men who give this excuse are either unacquainted with the facts relative to the real danger or they are deceiving themselves. A disinclination to do necessary work, mental and physical, may lead a man to believe that the reason he does not take up X-ray work is because he believes it to be "dangerous."

Radium by the recently discovered element radium are very similar to the X-rays.

The commercial, so-called, radium is not pure radium. It is a salt of radium, usually radium bromid. So far, radium never has been isolated. Radium bromid is a white crystal.

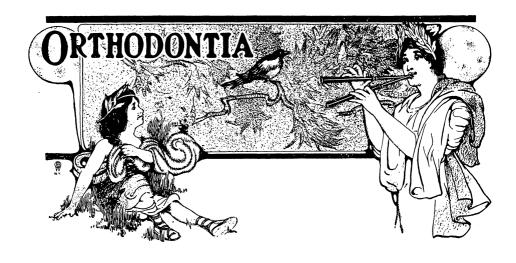
"In 1896 it was discovered that the metal uranium gave off rays very similar to X-rays. Observing that different pieces of uranium varied greatly in their radio-activity, M. and Mme. Curie, of Paris, working on the hypothesis that uranium itself was not radio-active at all, but derived this property from some impurity incorporated in it, isolated radium bromid from the metal uranium."*

At present radium salts are obtained from uranium oxid, which latter is first obtained from pitch blend, a heavy black mineral, in appearance somewhat similar to anthracite coal. One ton of pitchblend must be treated with approximately five tons of various chemicals and fifty tons of water to obtain one gram of radium bromid. The present market price of one gram of radium bromid ranges from \$1,500 to \$125,000, according to the radio-activity of the salt.

Radium rays, like X-rays, cannot be reflected or refracted. They travel in straight lines, and secondary rays are given off from objects which they strike. They penetrate objects directly according to the density of the object, and act on a photographic plate like light and X-rays. Their physiologic effect on the skin is very similar to X-rays. They produce a dermatitis almost identical to X-ray dermatitis. Beiquerel carried a sealed glass tube containing 0.2 gram of radium salt in his shirt pocket for six hours. Fifteen days thereafter a dermatitis closely simulating X-ray dermatitis appeared, then subsided in about thirty days. One case of fatality from leukemia caused, presumably, by radium has been reported.

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^{*}Tousey, "Medical Electricity and Roentgen Rays."



Che Library of An Orthodontist.

By B. E. LISCHER, St. Louis.

Read before the American Society of Orthodontists, Chicago, July, 1912.

Though orthodontics is frequently referred to as the youngest member of the dental household, all indications point to such a voluminous literary output on the part of its devotees that it seems desirable to classify its rapidly increasing literature. Its international interests have likewise been so extended in recent years that one must keep in close touch with the work of colleagues in foreign lands if one wishes to be truly progressive.

The writer has frequently received letters from students and teachers of orthodontics regarding its history and literature, which indicate a growing interest in this phase of the subject. The following classification is offered merely as a beginning, and will, it is hoped, be of value to all who are trying to build up a library in this field.

I. General Works.

(a) Dental books containing chapters on orthodontics:

Angle, E. H.—American Text-Book of Operative Dentistry, Philadelphia, 6th Ed., 1911.

Berdmore, Th.—A Treatise on the Disorders and Deformities of the Teeth and Gums, London, 1768.

Bourdet.—Recherches et Observations de l'art du Dentiste, 2 vols., Paris, 1757.

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Case, C.—American Text-Book of Operative Dentistry, Philadelphia, 6th Ed., 1911.

Catalan, L. J.-Memoire, Paris, 1826.

Colyer, J. F.—Diseases and Injuries of the Teeth, 3d Ed., London, 1912.

Delabarre, C. F.—Traite de la seconde dentition et methode naturelle de la diriger, Paris, 1819.

Desirabode.—Nouveaux elements, 2 vols., Paris, 1843.

Duval.—De la Arrangement des secondes dents, Paris, 1820.

Fauchard, P.—Le chirurgien dentiste ou traite des dents, 2 vols., Paris, 1728.

Fox, J.—Natural History of the Human Teeth, London, 1803.

Garretson, J. E.—A System of Oral Surgery, Philadelphia, 5th Ed., 1890.

Goddard, C. L.—American Text-Book of Prosthetic Dentistry, Philadelphia, 2d Ed., 1896.

Guilford, S. H.—American System of Dentistry, II, Philadelphia, 1887.

Harris, Ch. A.—Principles and Practice of Dental Surgery, Philadelphia, 11th Ed., 1875.

Hunter, J.—The Natural History of the Human Teeth, London, 1771. Laforque, L.—L'art du dentiste, Paris, 1802.

Lefoulon, J.—Nouveau traite de l'art du dentiste, Paris, 1841, American Ed., 1844.

Linderer, C. J. and J.—Handbuch der Zahnheilkunde, Berlin, 1834. Linderer, J.—Die Zahnheilkunde, Erlangen, 1851.

Magitot, E.—Traite des anomalies du systeme dentaire, Paris, 1877. Martinier, P.—Clinique de Prothese Dentaire, Paris, 1903.

Maury, F.—Traite complete de l'art du dentiste, Paris, 1828; American Ed., 1843.

Pullen, H. A.—Text-Book of Operative Dentistry, Philadelphia, 1908. Schange, J. M. A.—Precis s. le redressement des dents, Paris, 1841.

Sewill, H.—Irregularities and Diseases of the Teeth, London, 1870. Sigmond.—A Practical and Domestic Treatise on the Diseases and

Irregularities of the Teeth and Gums, Bath, 1825.

Von Metnitz, J. R.—Lehrbuch d. Zahnheilk., Berlin, 1903.

Sternfeld, A.—Handbuch der Zahnheilkunde, 2d Ed., Wien, 1902.

Tomes, Ch. S.—A System of Dental Surgery, 5th Ed., Philadelphia, 1906.



(b) Books on related subjects:

Under this heading a long list of worthy texts could easily be presented, but the writer feels that each reader will prefer to include his favorite authors. Hence only a very few are enumerated.

Anatomy, Including Histology.

Tomes, C. S.—Dental Anatomy, Human and Comparative, Philadelphia, 5th Ed., 1898.

Anthropology.

Keane, A. H.—The World's Peoples, New York, 1908.

Biology.

Castle, W. E.—Heredity, New York, 1911.

Davenport, C. B.—Heredity in Relation to Eugenics, New York, 1911. Herter, C.—Biological Aspects of Human Problems, New York, 1911. Jordan and Kellogg—Evolution and Animal Life, New York, 1907. Thomson, J. A.—The Science of Life, London.

Heredity, New York, 1908.

Embryology.

McMurrich, J. P.—The Development of the Human Body, Philadelphia, 1903.

Esthetics.

Santayana, G.—The Sense of Beauty, New York, 1905.

Metallurav.

Essig and Koenig-Dental Metallurgy, 6th Ed., Philadelphia, 1909.

Orthopedics.

Taylor, H. L.—Orthopedic Surgery, New York and London, 1909.

Pathology.

Pickerill, H. B.—The Prevention of Dental Caries and Oral Sepsis, London, 1912.

Pediatrics.

Holt, L. E.—The Diseases of Infancy and Childhood, New York, 1897.

Rhinology.

Lack, H. Lambert—The Diseases of the Nose and Accessory Sinuses, London, 1906.

Sociology.

Ripley, W. Z.—The Races of Europe, New York, 1899.

Surgerv.

Kolle, F. S.—Plastic and Cosmetic Surgery, New York and London.

Blair, V. P.—Oral Surgery (in press).



II. Special Works.

(a) Books on orthodontics:

Angle, E. H.—Malocclusion of the Teeth, Philadelphia, 1907.

Case, C. S.—Dental Orthopedia, Chicago, 1908.

Colyer, J. F.—Notes On the Treatment of Irregularities, London, 1900.

Dunogier, S.—Orthodontie, Paris, 1895.

Farrar, J. N.—Irregularities of the Teeth, 2 vols., New York, 1888.

Gaillard, G.—Des deviations des arcades dentaires, Paris, 1879.

Gaillard, G.—Orthodontie, Fasc. IX, Traite de Stomatologie (announced).

Gaine, Chas.—On Certain Irregularities of the Teeth, Bath, 1858.

Guilford, S. H.—Orthodontia, Philadelphia, 4th Ed., 1905.

Herbst, E.-Anleitung zur Gesichtsorthopädie, Bremen, 1906.

Atlas und Grundriss der Zahnärtzlichen Orthopädie, München, 1910.

Jackson, V. H.—Orthodontia and Orthopedia of the Face, Philadelphia, 1904.

Jung, Carl—Leitfaden der Zahn—und Kieferkorrektur, Leipzig und Wien, 1906.

Kingsley, N. W.—A Treatise on Oral Deformities, New York, 1880.

Knapp, M. A.—Orthodontia Practically Treated, Minneapolis, 1904.

Kneisel, F. Ch.—Der Schiefstand der Zähne, Berlin, 1836.

Körbitz, A.—Kursus der Orthodontie, 2d Ed., Berlin, 1911.

Langsdorff, G. V.—Prakt. Anweisung f. d. Regulirung d. Zähne, Würzburg, 1863.

Le Foulon, J.—Des deviations des dents et de l'orthopedie dentaire, Paris, 1859.

Lischer, B. E.—Principles and Methods of Orthodontics, Philadelphia, 1912.

Lomnitz, C. B. A.—Die Lehre vom Schiefstand d. Zähne, Berlin, 1840.

MacDowell, J. N.—Orthodontia, Chicago, 1901.

Pfaff, W.-Lehrbuch der Orthodontie, 2d Ed., Leipzig, 1908.

Subirana, L.—Anomalies de la Occlusion, Madrid, 1909.

Talbot, E. S.—Irregularities of the Teeth, 4th Ed., Philadelphia, 1901. Walkhoff, O.—Die Unregelmaessigkeiten in den Zahnstellungen, Leipzig, 1801.

Wallace, J. Sim.—The Irregularities of the Teeth, London, 1904. Werner, K.—Ueber Anomalien d. Zahnstellung, Giessen, 1868.

(b) Monographs on orthodontics:

It is gradually becoming apparent that as the scope and methods of



orthodontics are extended, and its numerous problems worked out in greater detail, our texts and journals will be inadequate in comprehensive presentation of subject matter. For it must be admitted that text-books, aside from their inherent limitations, appear too infrequently to comply with all the demands of progress. Journals, on the other hand, rarely control, in advance, the scope of their contents. Hence the carefully edited monograph, with its detailed description of a single topic, will, in all probability, come into general favor.

In Germany, two series of monographs have already made their appearance, but they have been planned to embrace the entire field of dentistry. However, the following orthodontic numbers have thus far been published:

Herbst, E.—Die Regulierung der anomalen Zahn—und Kieferstellung mit Schrauben und Scharnieren; Heft 14, Deutsche Zahnheilkunde in Vortägen, Leipzig, 1910.

Pfaff, W.-Ueber die Entwicklung der Orthodontie, Heft 2. Sammlung von Vortägen aus dem Gebiete d. Zahnheilkunde, Leipzig, 1910.

Herber, Carl—Die Lehre von der Vererbung, etc., Heft 4, ibid., Leipzig, 1910.

III. Journals and Society Proceedings.

(a) General journals and societies:

From the earliest times, oral deformities have been observed and treated by physicians and dentists; hence medical and dental journals contain numerous articles which command our attention. To enumerate all is neither possible nor desirable, but the following stand out as landmarks in the evolution of the art.

Societies.

International Medical Congresses. International Dental Congresses. National Dental Association. Illinois State Dental Society. New York State Dental Society.

Journals.

ITEMS OF INTEREST, New York. The Dental Cosmos, Philadelphia.

The Dental Review, Chicago.

The Journal of the British Dental Association.

The British Journal of Dental Science, London. Deutsche Monatsschrift für Zahnheilkunde, Leipsic.

Oesterreichisch-ungarische Vierteljahrschrift für Zahnheilkunde,

Wien.

Ergebnisse der gesamten Zahnheilkunde, Wiesbaden.



(b) Special societies and journals:

Recent advances have so extended the field of orthodontics that special societies and journals were deemed advisable. The excellent work thus far accomplished bears ample testimony to the wise judgment of the pioneers who inaugurated these undertakings. The following societies and journals are exclusively devoted to the advancement of the art:

Societies.

The American Society of Orthodontists.

Deutsche Gesellschaft für Orthodontie.

Alumni Society Angle School of Orthodontia.

Europäische Gesellschaft für Orthodontie.

The British Society for the Study of Orthodontics.

Orthodontische Gesellschaft in Wien.

Journals.

Zeitschrift für Zahnärtzliche Orthopädie, Berlin. The American Orthodontist, New York.

10. Portraits and Biographies.

Every student of the history of the art soon finds himself interested in the lives of the great leaders who were instrumental in promoting its progress. Hence a carefully edited *Portrait* and *Biographical Series* would, undoubtedly, be welcomed by many. But such a series presents two main difficulties: first, it compels us to distinguish between men of temporary popularity and those of enduring fame; and second, portraits of many of the founders need yet to be "discovered" in the libraries of America and Europe.

U. Bibliographies and Library Index.

Bibliographies of our literature may be divided into general and special, the earlier classifications being largely devoted to an enumeration of dental text-books. The following have thus far appeared:

Black, A. D.—Classified Subject Index to the Proc. 1st Dist. Dent. Society, N. Y., 1868-1909. Chicago, 1909.

Crowley, C. H.—Dental Bibliography, Philadelphia, 1885.

Linderer, J.—Die Zahnheilkunde, V, Erlangen, 1851.

Maury, F.—Treatise on the Dental Art, Appendix, American trans. by J. B. Savier, Philadelphia, 1843.

Port, Prof. Dr.—Index der deutschen zahnärtzlichen Literatur, Heidelberg, 1909.

Sternfeld, A.—Zahnärtzliche Bücherkunde, Kahrlsruhe, 1891:

Taft, J.—Index of the Periodical Literature of Dental Science and Art, Philadelphia, 1886.

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Zahnartzlicher Weltindex—Ergebnisse der gesamten Zahnheilkunde, Zweiter Jahrgang, I. Heft. Wiesbaden, 1911 (and all subsequent numbers).

History of Dental and Oral Science in American, Philadelphia, 1876. Prepared under the direction of the American Academy of Dental Science.

If, to the above list, we add all the important essays which have appeared in the journals, it will be seen that the library of an orthodontist is one of considerable size, and the annual additions soon render it so unwieldy that a catalogue, or index, becomes indispensable. The following authors have suggested methods for this purpose:

Black, A. D.—The Dewey Decimal Classification and Index Applied to Dental Literature, Inst. Dent. Pedagogics, 16th Annual Report, 1909. Weinberger, B. W.—Index of Orthodontic Literature, American Orthodontist, January, 1912.

Discussion on the Paper of Dr. Lischer.

I would like to take advantage of the opportunity **Dr. Wm. E. Walker.** to thank Dr. Hawley for asking me to open the discussion on this paper, for the reason that I was furnished a copy of the paper in advance, a copy which I have been very much interested in reading, although there is nothing in the paper to discuss. It is not discussable. I commend it heartily to all of you. It is a most excellent document to have in our libraries. It will tend to broaden us and make us get away from the tendency that some have tried to impress upon us of holding down certain narrow lines.

If it is not out of order, I wish to compliment the author on his new book which I had the pleasure of reading on the train while coming to this meeting, and those who have not a copy of it will find it worth while, because it is so different from the average book on orthodontia, in that the author gives credit to others and does not take it all to himself.

Speaking along the line of literature, it occurs Dr. Frank M. Casto. to me that it would be a very good idea for this society to have put into bound volumes the proceedings of the society since its organization, to be kept as the property of the American Society of Orthodontists.

The President.

How would you keep them?

Dr. Casto.

I think it would be a valuable thing to keep the proceedings of the Society in bound form as the property of the American Society of Orthodontists.



The President.

If there were some place where these proceedings could be kept on file and referred to whenever necessary, it would be well. My experience in other societies is that when the proceedings have accumulated they have gradually been relegated to the archives, and somebody forgets whose archives they are relegated to. However, I have no desire to throw cold water on the scheme if it seems desirable to the Society.

Regarding Dr. Lischer's paper, he is eminently Dr. Wm. J. Brady. qualified to undertake the subject he has presented here in preparing a list of things that have been published on orthodontia. Judging from his new book, he must have read them all. He knows about them. I would offer this suggestion that this particular part of the proceedings of the American Society of Orthodontists be published in pamphlet form, so that we can have copies of this particular paper put in our individual archives, and not have to search the dental journals to find out many of the articles that it contains.

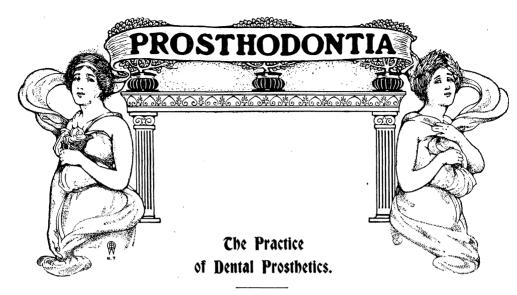
The President.

Our proceedings are published, Dr. Brady. We can have reprints of the article. It is not exactly a discussable subject, but rather a matter of record.

Dr. Lischer.

The only remark I want to make is that I have arranged for the reprints, so that I can sent a reprint to every member.





By Geo. H. Wilson, D.D.S., Cleveland, O. Read before the New Jersey State Dental Society at Cape May, N. J., July, 1912.

The request for a paper upon this subject was accompanied with a suggestion that it treat of the reasons for the neglect of prosthetic dentistry. This necessarily confines us to the psychological phases of dentistry in general, and prosthetics in particular.

While formerly dentistry was considered as a special branch of medicine, there is now a tendency to count it as a distinct profession composed of several departments or specialties. Whether this classification of the profession be wise or just is not under consideration, and the writer neither expresses nor implies an opinion thereupon. However, the paper is designed to be a study of the modern trend; therefore its consideration of dentistry as a general profession composed of several specialties.

The practitioners of dentistry devote themselves to general practice, or to one or more of the special lines of practice. The specialties are, operative, prosthetic, orthodontic, surgical and prophylactic. These divisions are so well differentiated that one only needs defining. What is the distinction between mechanics and prosthetics?

In these early days of the profession of dentistry there were but two departments of practice. The two terms "operative" and "mechanical" very well served their mission, although every thoughtful mind recognized the arbitrary meaning implied. The term "operative dentistry" was applied to the work (mechanics) performed at the chair, and "mechanical dentistry" to that prosecuted in the laboratory. With the modern diversity of practice and classification new interpretations are given to old terms, hence the confusion of thought.



In a broad sense, dentistry consists of a profession and a manufactory. The members of the profession serve the patient; they are controlled by special legal enactments; are required to have certain mental and manipulative attainments; and are subject to prosecution for malpractice. The manufacturer serves the profession, but not the patient; he is not required by law to have acquired certain mental and manipulative attainments, nor is he held responsible by statute for his acts. His success depends solely upon his ability to satisfy his patrons. Manufacturers consist of two classes: First, the mechanical dentist, who manufactures appliances for the profession to apply to the patient, and who works in the professional or in a commercial laboratory; and second, the manufacturer of apparati, instruments and stock material; he works in a factory. Thus is the mechanical dentist classified.

Prosthetic dentistry—prosthesis—is defined as: "The science, art and esthetics of restoring a lost dental organ or organs and associate parts with an appliance." Hence we conclude that mechanical dentistry is a term that should be applied to that part of dental work performed in a laboratory. Prosthetic dentistry may include mechanical dentistry, but its distinguishing feature is the study of and manipulations associated with restorations for the patient. It must be accepted as a fact that there is not nor can there be a well-defined line between the departments of operative and prosthetic dentistry. As the dividing line must be arbitrarily set and as the specialties are in a formative stage, there is not an accepted line of demarcation. However, the writer believes the definition given is the best expression extant of the present status of the specialty.

Crown and Bridge-work. It is apparent by the definition that a crown belongs to operative dentistry, and a bridge to prosthetic dentistry; nevertheless, in practice the crown and bridge are inseparable and form a connecting

link between the two specialties. While crown and bridge-work has been associated with and taught in connection with prosthetic dentistry, the trend of thought now seems to be that it properly belongs to operative dentistry. This placing of crown and bridge-work is logical and just, because the fundamental principle involved in operative dentistry is the conservation and preservation of the natural teeth, while the fundamental principle of prosthetics is the restoration of that which is lost. The science and art of operative dentistry is based upon physiology and pathology, while the science and art of prosthetic dentistry is based upon mechanics and esthetics. Therefore, the best interests of the patient are subserved by considering the crown or bridge as a material medicament in the hands of the conserver and preserver of the dental organs, rather than as an article of cosmetics, which it becomes when it is relegated to the prosthetist, or crown and bridge specialist.

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The bridge has now been used, and abused, by the profession for nearly a third of a century, until it must be a question in the mind of a thoughtful man on which side of the balance the bridge belongs; whether it has been a gain or a loss to humanity. As the conserver and preserver of the dental organs is the true specialist of medicine, so the bridge as a material medicament belongs to him, and as such the remedy is to be used when indicated; but not as a panacea for filling every space in the dental arches. The question with the learned doctor of dentistry should be, *Should* the bridge be used? not, *Can* it be used?

Prosthesis, like all of the departments of dentistry, is scientific, because it is based upon classified knowledge; it is artistic when the appliance is skilfully and neatly constructed; it is utilitarian art when it is so constructed that it is useful and aids mastication and enunciation; and ideal art or esthetic when it restores or creates harmony of the features of the face. The art which conceals the need for restoration and its artificiality is ideal art, or esthetics.

What is prosthetic dentistry? Of what does it

Prosthetic Dentistry. consist? The essential distinguishing factors of prosthetic dentistry are: 1st, diagnosing and suggesting treatment; 2nd, taking measurements; and 3rd, inserting appliances in the oral cavity. Therefore, every man performing or doing these three operations is either practicing or doing prosthetic dentistry; he is either serving or doing his patient. The prosthetist may construct the mechanical appliance, or he may have it constructed by his mechanical man in his laboratory, or he may send it out to a commercial laboratory. The constructing of the appliance is a necessity, it is a useful art and worthy of the highest grade of a mechanical genius, but it is no part of the profession of prosthetic dentisty. Nevertheless, there are certain portions of the mechanical work that no prosthetist who comprehends and loves his work will ever relegate to another.

The second-named factor of the professional side of prosthetic dentistry—taking measurements—consists of far more important things than taking impressions and bites. There are several measurements that can be indicated by material means, but there are other measurements that exist only in the mind of the artist and can only be communicated to another by the completed work, or creation. Mr. Hubbard has well expressed these mental measurements when he says: "Genius or art is the expression of a man's joy in his work." A man can give a comprehensive expression of his joy to another only through his perfected creation. A man may acquire and be able to reproduce the creation of the joy of an artist, but the joy is not communicable by words, marks or millimeters;



only by the completed work itself can it be comprehended. Do I make myself clear?

Prosthetic dentistry is a profession and its devotee should be educated and an artist. A mechanical dentist should be proficient in his one attainment—that is, as a high-grade artisan—but he need not have the artistic sense, for neither the statute law nor his work will permit him to use it. It is true that a high-grade prosthetic dentist may work as a mechanical man or conduct a commercial laboratory, but that does not make a profession of mechanical dentistry, any more than if the same man should start a dental goods factory or a plumbing shop would make No one profession of these useful trades. that the writer is opposed to the mechanical man either in the private or commercial laboratory, for he is not; he believes he is a necessity and a blessing to the profession, but he does wish to be understood as condemning the professional man for the manner in which he abuses this useful agency. The mechanical man should be called upon to do the mechanical things that will save the time of the busy prosthetist, but the prosthetist should do all those things that have to do with the individualizing of the appliance; in other words, the esthetics. This includes the setting of the teeth in all full artificial dentures, some partials, and the contouring of the wax restorations.

Is the prosthetic dental genius born or made? The writer is conscious of the varying quality and quantity of the attributes of mankind, but he is thoroughly in accord with the thoughtful mind that said: "Genus is infinite capacity for painstaking," and he believes that this genius, accompanied with desire and energy, will carry any man well toward the top of his chosen profession.

Specializing. In the dental profession there are two ideas associated with this term: first, giving special attention to a line of endeavor; and second, limiting practice to a restricted portion of the profession. Probably every earnest member of the profession specializes in this first sense, and thereby perfects himself in time in all the lines of his endeavor. That a man should specialize in the second sense stated is a very serious proposition, and it should be given much thought and lengthy consideration before it is attempted.

Why should a man limit himself to restricted portions of his profession? There are two reasons: first, a hope for greater financial returns; and second, to have more time for study and self-improvement. These propositions will bear investigation.

Proposition number one—A hope for greater financial returns. It is quite probable the one contemplating specializing, with this motive, is



either a young man striving to establish a practice or a man of some years in practice, but one who has failed to attract to himself a large clientele. Such a man should ask himself these questions: What special qualifications have I for such special work? What means have I for attracting patients for this restricted work? What will be the attitude of the profession toward me in this undertaking? Will I be justified in demanding a larger fee? for a fee demands an equivalent. Am I justified in throwing away the larger part of my present practice and striving to build a new one from a much smaller field of supply? Would it not be better for me to continue all of the sources of income I now have, but apply myself enthusiastically in developing a special line, by study and experimentation, until I have developed such recognized ability that the undesired departments of my practice are crowded out? This last question should be pondered long and earnestly, because it contains the idea of the sane method of establishing a limited practice in any specialty.

Proposition number two—To have more time for study and self-improvement. A most worthy motive, and certainly there should be, and probably will be, plenty of the desired time. What should be studied? First the individual case, to improve the scheme and technique of treatment; and second, original research. Our profession is young, it is well started upon scientific principles, but as yet the surface only has been scratched. There is room for any number of workers. Original research workers are never jostled.

Prosthetic Dentistry as a Eimited Practice.

There are several reasons why prosthetic dentistry is unfavorable for exclusive practice. First: The mechanics of prosthetics is the introduction of the novitiate to the profession; therefore, in time he comes to consider it (unconsciously, perhaps) as

menial, and as not quite worthy of the capable professional man. Another reason for this mental attitude is that the technique has been exalted and the esthetics largely ignored, while the fact is, the esthetics is all that makes a profession of this department. Second: Familiarity with the department. Because of the reasons just given the general practitioner considers he is fully capable of practicing or overseeing this department. And he should be. Third: Commercial laboratories. The commercial laboratory is in every way legitimate and a logical concomitant; but it largely destroys the possibility of establishing an exclusive practice in prosthetics, because patients must be largely referred by general practitioners and operators; and the commercial laboratory makes it possible for the dentist to receive a relatively large fee, without the drudgery, for the time consumed. Fourth: Personal equation of patient.



This factor, when composed of indifference to pride, perseverance and adaptability, often means failure from a mechanical point of view; and when composed of aggressiveness and monstrous ideas of art, means a contest that is apt to be offensive to an esthetic nature. Fifth: Nonadvertising. For advertising itself prosthesis is a perfect antithesis to orthodontia, for the more perfect the prosthetic appliance the less noticeable it becomes: the more pleased the patient the less he will be inclined to mention the prosthetist's restoration; the more refined the patient the less inclined is he to speak of his physical defects. On the contrary, the orthodontist's patients are mostly of the inquisitive, talkative and un-As but few general practitioners of dentistry sophisticated age. have felt competent to produce desired orthodontic results and to demand adequate fees, this department of practice has been most favorable for specialists. Sixth: Age of patients. Necessarily most prosthetic patients are, or should be, of advanced years. This implies that they are not controlling or paying the bills of another generation, and therefore are not of especial value to the prosthetist from this view point. Nor are they to be depended upon as future patrons, because of the inherent quality of dissolution associated with old age. The losing of patients is disquieting with any professional man, but when it is of frequent occurrence—in fact, the rule—and beyond his control it has a tendency to depress; while those specialists dealing with youth are most favorable for optimism, and optimism means joy of life.

Is there need for specialists in prosthesis? Certainly! Why? Because specializing tends toward perfection, and because those deprived of their dental organs need the best that science, art and esthetics can produce.

Who should specialize in prosthesis? Any man who has gained sufficient knowledge, experience and love for the work. How is the knowledge obtained? By the study of anatomy, both general and dental; physics, chemistry and metallurgy; and art or esthetics, as pertaining to form, color and harmony. Experience—how much, and how obtained? A thorough training in practical mechanics in the laboratory, and not less than ten years' successful general practice at the chair. A man's love for his work is known by his interest and absorption in and devotion to a given field of endeavor.

How should a man establish a limited practice in prosthesis? He should first establish a general practice, and when he has arrived at a time of life when he desires to discontinue operative and surgical dentistry he should associate with himself a younger man, to hold and add to this class of clientele. By this means he retains his patients of many years, and when in advancing years they require the services of a pros-

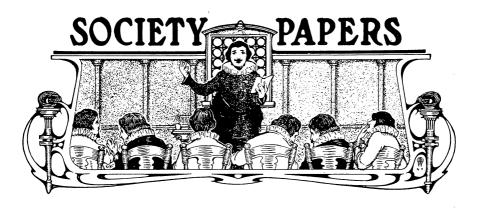


thetist they are his patients. He knows the esthetic requirement and personal equation from long association, and the service rendered is under the most agreeable environment. However, should he determine to establish an exclusive limited prosthetic practice he is compelling his former patients to seek a new dentist, and then when they are in need of prosthetic services he may get them—perhaps. An exclusive limited practice means a referred practice, and this implies one deprived of that sympathetic confidence associated with many years of mutual dependence.

What are the reasons for the modern neglect of prosthetic dentistry? Answer: Colleges and their methods of teaching. Should the preceptor method of teaching dentistry be re-established? The writer has no hesitancy in saying most emphatically, No. The idea of college training is a logical one and gives the greater assurance that the student will have a competent teacher, and will receive something approaching systematic instruction. The college justly exalts the conservation and preservation of the natural teeth; nevertheless, a just appreciation of the importance of dental prosthetics should be inculcated and a radical change made in its teaching methods. The use of base metals as substitutes for the noble metals in technic work should be forbidden, and all work and requirements made as nearly practical as possible. All clinical prosthetic patients should be given the best service and the best materials should be used for the greatest good of the class, regardless of the expense to the college; then would prosthetics be exalted and come into its own. Is the commercial laboratory a cause for the depreciated status of prosthetics? It is a result, not a cause.

In conclusion: John Fiske says, "The essential feature of man is his unlimited possibilities of development." May the members of the dental profession interested in prosthetics so perfect themselves that there can be no question of their professional recognition.





Will the Dental Hygiene Movement Make Necessary the Crained Dental Assistant or Woman Nurse?

By Herbert L. Wheeler, D.D.S., New York City.

Read before the New Jersey State Dental Society at Cape May, N. J., July, 1912.

The title I have adopted is somewhat more pretentious than the paper. The question of dental assistant or trained nurse, which I desire to discuss at this time, is not the question which has already been answered concerning the usual dental assistant (generally a woman) who makes herself so useful in the many varied demands of a dental office, but is the question of the so-called dental nurse who shall be licensed to perform some operations which at the present time are not permitted to any but the graduate and licensed dental practitioner.

While the advantages of mouth hygiene, like the report of Mark Twain's death while he was abroad, have been "greatly exaggerated," nevertheless it seems to be pretty generally believed by all thinking men of the profession that hygienic care and cleanliness of the mouth will lessen the ravages not only of dental caries, but of the disease variously termed Riggs' disease, pyorrhea, interstitial gingivitis, etc. In an admirable editorial in the June Cosmos, by Dr. E. C. Kirk, this subject is dealt with. so far as the ground is covered, in a most intelligent manner; but the trend of the editorial which I speak of leaves one with the feeling that the question of discrimination between the dental assistant which we now have and the proposed dental nurse is somewhat obscure in the mind of the writer. In those States which permit operations by an assistant under the supervision of the dentist there would seem to be no reason for any change in the law at the present time to accomplish the desired end of having teeth cleaned and treated by the dentist's assistant, whether the assistant be male or female. But in many States the law is such that for



an assistant to do any work in the mouth (save possibly the taking of an impression) would be an infraction of the law, and punishable as such.

A great many dentists who have presumed to express opinions upon or discuss this subject have also done it with the avowed end in view of making it possible to supply school clinics, various other institutions and dental offices with a licensed assistant who shall be permitted not only to polish the teeth, but shall be permitted to perform the surgical operation of scraping the roots in pyorrhea, possibly removing deciduous teeth and their roots, making splints of wire or the fixed metal or vulcanite type for holding loose teeth in place, and generally performing a great many operations that are not permitted by the law.

It is to this interpretation of the dental nurse that this paper is addressed. The office assistant who uses a mallet to pound gold, keeps the office neat and tidy, attends to our accounts, makes appointments, answers correspondence, sterilizes instruments, etc., is not under discussion. But the question of permitting either a specially licensed or specially trained nurse, man or woman, to perform certain operations that are now restricted to the trained and licensed dentist is the problem which it appears to me confronts us at the present time, and with this alone I am dealing.

The Craining of Nurses.

Some of the members of a committee to which I belong in the New York State Dental Society had occasion to consult certain officers of the New York Board of Regents at Albany in May upon this

question of the dental nurse, and the feeling expressed at that time by the officials at Albany was most decidedly against adopting the name "dental nurse," as the State of New York licenses trained nurses who must have at least two or three years' training in a hospital which shall be equipped for teaching and training in a manner satisfactory to the Board These nurses are required to have at least one year in a recognized high school as a preliminary training. Most of them have more. They are required to serve two or three years—I have forgotten which—in the institution, during which time they must attend lectures regularly upon subjects pertaining to their work, and during this time they are not allowed to go out and do work under any circumstances. Their entire work must be done in the institution from which they are receiving their training, and under the supervision and instruction of the proper teachers and officers. In view of the requirements of the law of New York State upon this subject, the officer in question of the Board of Regents felt that it would not be permissible for the dentists to apply the term "dental nurse" to their assistant, and if such an attempt were made the Board of Regents would doubtless find means of preventing the title being adopted, at least in the State of New York.



Now I have described to you the training required to fit a nurse for her vocation in life. She must, after having undergone this training for the period of time mentioned, pass a certain examination before a board for examining nurses, which, like the medical and dental boards, are under the control of the Board of Regents. Now what privileges are allowed the trained nurse after this severe training, which is almost equal to the requirements of a trained dentist? She is allowed, under the instruction of the physician who is attending the patient, to administer medicine, but not to prescribe it. That is left entirely to the physician. She is allowed in a surgical case to remove bandages—that is, to undress and dress wounds, fractures, etc.—but at no time or place is she permitted in any way to perform a surgical operation or perform any act which might require a knowledge of detail that would make the individual performing it responsible for the welfare, and possibly the life, of the patient. is not allowed to vary in a single instance from the strict instructions of the physician in charge without not only being in danger of losing her position, but possibly being brought before the board of examiners for a revocation of her license. The training required is such as to make an individual of ordinary intelligence extremely proficient in the work required of him or her, but he is held rigidly within the field of assistance to the physician, and acting within the strict limitations of his orders.

Now is there any present means of training a dental assistant or nurse to fill the same place to the dentist that the trained and recognized nurse of the present day does to the physician or surgeon? I think you will agree with me that at the present time there is no adequate place to train such a nurse, unless it be in the dental departments of the regularly equipped hospitals which have training schools for nurses. The attitude of those who have been the most vociferous in advocating the so-called dental nurse has, if I understand them correctly, been one which demanded the privilege of training their own nurses. Now the physician and surgeon, no matter how great their skill, are not permitted to train their own nurses. They must receive their diploma from a recognized training school for nurses connected with a hospital, which is capable of keeping them busy and does not send them out to do private nursing during the period of their training. This, at least, is the situation in New York State, and my observation thus far is that the laws in New York State in regard to medicines, dentistry and the trained nurse are not excelled by any State in the Union.

Flow Shall the Dental Murses Be Crained?

The problem, then, that confronts us, if we are to have this type of nurse, is, how shall we train her, and how shall we insure that she has the proper preliminary education and training before she is licensed to fill this position? It seems to me that is the first



That it is perfectly possible to settle this question, step to be settled. and settle it intelligently and satisfactorily so that the public shall be protected, I am quite sure, as I am also sure in my own mind that a good many whom I have heard advocate dental nurses of this type have not demonstrated as yet that they have the first appreciation of how they are going about obtaining the trained dental nurse. Some colleges, notably Harvard Dental College, have arranged a course for the trained dental nurse, and this may work out satisfactorily. But from my observation of dental infirmaries, the instructor at these infirmaries has his time more than occupied in training the would-be dentist, and how the dental nurse can be trained in association with dental students who are ignorant of the details of office practice themselves is a problem that has not been made clear to me as yet, though I do not deny the possibility of a satisfactory course being constructed for trained dental nurses at the dental college and dental infirmary. As in many other things, Massachusetts has led the way in an attempt to secure the necessary legislation to permit nurses of the type I am discussing being licensed and employed by the dentists of that State. Now do not misunderstand me. I am not sure but that the dental nurse of this type is a necessity; I am not sure but that we should all support the attempt to obtain such a dental nurse; I am sure that in some form the attempt to secure a dental assistant of this type will be successful sooner or later, but I believe that the proposed Massachusetts law as it was drafted was the most pernicious piece of dental legislation, or one of the most pernicious, that it has ever been my privilege to read: and while I doubt not for an instant the motives of the men who advocated and endeavored to pass that law, I know of no way they could have adopted to do the cause more injury than they did by advocating such a law. I trust, however, that they have learned wisdom from experience and that a law of a satisfactory nature may be drafted and passed in the future, as I would like to see the experiment tried; and as Massachusetts as a State has in many cases been fond of trying experiments, perhaps that would be a good State in which to try this one.

Limitation of Durses Sphere.

After you have solved the problem of what preliminary education your trained nurse or assistant shall have, and what professional training he or she shall have and how he or she shall secure such pro-

fessional training, the problem will of necessity arise, Where shall the limit be put upon the operations that may be performed by this body of licensed dental assistants or nurses? I might as well interject here my belief that, in a short time, at least, if a plan to secure trained and licensed dental nurses is worked out, these dental nurses will eventually be re-



cruited entirely from the ranks of women, and I base my opinion upon some facts which I know in regard to trained male nurses. Bellevue Hospital had from its inception a training school for male nurses as well as female, and yet two years ago this school for training male nurses was entirely wiped out, closed up, because physicians found that in all cases whatsoever, including the fractious insane, women nurses are better than men; they do their work better, are more reliable and in every way more satisfactory and efficient; and I am sure that if we arrive at the licensed dental nurse the same condition will eventually prevail in dentistry. In fact, I would be suspicious that any man who attempted to obtain a license as a dental nurse did it because he was incapable of obtaining the degree of D.D.S. and thought he could steal into the profession through this short-cut route.

But to take up the question, where shall the line of limitation be drawn on the work of the dental nurse or dental assistant? It has been advocated that women trained in this way could carry on the school dental clinic and various other forms and types of dental clinics and infirmaries. But can they? The trained nurse employed in the schools in New York City administers no medicine. She examines the eyes and the mouth and the throat, and having a fairly good knowledge of diagnosis drilled into her through her training in the hospital, she can discriminate between a well and a sick child. But having discriminated or diagnosed the case, she does not treat it. She notifies a Board of Health physician, or sends the child to a physician. Now the work of dentistry in the mouth is so related that it is doubtful if the dental nurse could be employed for anything more than the mere application of treatment for pulpitis by applying cotton saturated with a soothing medicine, or polishing the teeth with an orange-wood stick and pumice, or possibly scraping off the ordinary calcic deposit precipitated from the saliva or fluids of the mouth. We will say that these privileges could be granted to a licensed assistant without danger to the patient, for remember that the law is based upon the right of the State to protect the welfare of the patient, and not upon the desire of the State to increase the income of the dentist. When you come to the scraping, scaling, cutting and treating required in the severe cases of pyorrhea, in the treatment of putrescent pulp and fistulous openings, alveolar abscesses, etc., you are dealing with problems which are more liable to affect the health and welfare of the patient than you are when you are doing the mechanical work of placing a filling or making artificial substi-And yet there are probably no members of the profession who would for a moment concede that filling or making of crowns or bridges or artificial teeth should be work included in the privileges accorded the To my mind it would be more wise and rational to perdental nurse.

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mit filling and prosthetic work than to permit the scraping and scaling of what we call sanguinary calculus, the curetting of carious bone, the treatment of putrescent pulps and pyorrheal pockets and other allied operations, which would come under the head of hygienic treatment for neglected and uncared-for teeth. That it is possible—not only possible, but probable—that some line of limitations will be found and acted upon 1 am willing to admit, but so far as I have been able to read or hear articles upon this subject, there has been a silence as great as the one Kipling describes in "On the Road to Mandalay."

I agree with Dr. Kirk in his timely editorial that this is a question that demands our attention, not only on the grounds that he sets forth in this article, but also on the grounds of increasing the ability of the dentist to help carry on the work of physical salvation. But I feel sure that, like everything else, we will have to arrive at the sane conclusions upon this subject through the process of experience; and the experience to date is limited. Up in Connecticut, where the law allows a dentist to have an assistant under his immediate supervision, Dr. Fones has, I believe, found that the trained assistant in prophylactic work could be utilized to great advantage, and I have not heard of cases of the privilege being abused. But that it could be abused and, in my mind, would be abused under the law advocated recently in Massachusetts, I think there is little doubt.

What is needed at the present time is not so much long and flowery harangues upon the subject by people who have had no experience, but somebody to arise and solve the problem of what we shall demand as a preliminary education, of what we shall demand as a proper training before the assistant is licensed, and what limitations shall be drawn beyond which the assistant may not go. When these things are definitely agreed upon and a way is found to enforce the law against the malicious offender there is little doubt, to my mind, that some plan may be adopted which will make it possible to develop a body of licensed dental assistants who can be of great service to patients as well as to dentists. I may say that I have no great fear of this privilege being greatly abused by the dental advertiser and fakir. The fact is that these pariahs whose hands are against the public in the ethical dental profession can also be depended upon to be against each other when submitted to the crucial test. But while there are doubtless many of them that would indulge in the employment of unlicensed dental nurses and palm them off upon their patients as licensed ones, just as they now indulge in unlicensed practitioners. I am of the opinion that they can be as readily apprehended in this infraction of the law as they are in the illegal employment of unlicensed Some of the State societies have appointed a committee practitioners.



upon this subject, and I feel reasonably sanguine that some kind of a beginning to try the matter out will be made in the not distant future. chief problem that puzzles me at the present time is the question of the training. I am not sure but that both the dental departments of well organized and recognized hospitals and dental colleges can be utilized to train the dental nurse, but that the dental nurse should be examined by the dental examining board is a question I am not quite prepared to assent to. Physicians do not do the examining upon the Nurses' Board in New York, but nurses who have risen to the head of their profession and are known for their ability and judgment; and I am not sure but that the Nurses' Board which examines the trained hospital nurse would be the proper one to pass upon the trained dental nurse if such a thing should develop. At any rate, it is a question which involves so much that we can afford to go slowly and deliberately and use our intellects in considering the matter, rather than to be swayed by sentiment or somebody's oratory. For remember that oratorical language is as often based on fiction as it is upon fact.

Some Fallacies in Dentistry.

By V. W. Laughlin, D.D.S., Victor, Colo.
Read before the Colorado State Dental Society, at Colorado Springs, June, 1912.

The dental profession or any other profession must pose to a certain extent as a teacher to those not in the profession. A teacher cannot be fully satisfied with his work so long as there remain erroneous ideas in the minds of his pupils. Whether he is responsible for them or not does not matter. If he is a conscientious teacher he will endeavor to eradicate those wrong impressions.

Ever since I have been in dental practice, I have been confronted with ideas in the minds of the people and occasionally in the minds of dentists which are not quite exact. Often these errors are so slight that it seems hardly worth while to mention them, and yet if we expect dentistry to rank as a science, we must try to be exact.

Teeth Too Soft to Hold Fillings. One of the most prominent, as well as the most dangerous, of these errors is the idea which some patients have that their teeth are too soft to hold fillings. This is responsible for the loss of a great many teeth that could be saved, for patients are apt

to become discouraged in trying to save them, thinking they must be lost anyway. It would be difficult to say just where this idea starts. In



most cases, perhaps, in the mind of the patient or some of his friends. Dentists themselves may sometimes be to blame for it, if we are to believe what the patients tell us. They frequently say: "Dr. X told me my teeth are too soft to hold fillings." This must come, of course, from some incompetent operator, who either cannot or is too lazy to properly prepare the cavity or insert the filling. Then when the work fails the patient is told that his teeth are too soft to hold fillings.

There is, of course, a difference in the texture of teeth. We all notice it in preparing cavities, some being very difficult to cut even with good, sharp burs, while others are quite soft, almost chalky, with all degrees of hardness between the two. It must be admitted that it is much easier to make a filling stay in the strong, hard teeth than in the softer ones; but that is no excuse for not filling them. More care must be taken in the preparation of the cavity—especially the cavo-surface angle. It must be carefully beveled and smoothed. The cavity must be extended to include all chalky area—also extended to where the margins may be kept clean or under the free margin of the gum. In fact, all the rules for cavity preparation must be followed much more rigidly than may be necessary with the teeth of denser structure. Great care must also be taken in inserting the filling not to chip the margins—also to burnish the filling carefully over the margin in all directions.

Although the patient seems to get the idea that it is because his teeth are too soft, let us see some of the principal reasons why fillings do not remain in teeth.

Causes of Failure of Fillings.

Weak enamel walls are left without support. The base is left rounded instead of broad and flat, or some other detail of the retention form is omitted, such as dove-tailing on the occlusal surface. The margin is left in soft, chalky enamel that has

been etched by the dissolving away of the cement substance between the rods leaving the ends of the enamel rods projecting, thereby making a rough surface at the margin.

So, then, let us break away all weak enamel walls, or where it is not advisable to break it entirely away, support it with cement. This may be done with an inlay or an amalgam filling set in soft cement as an inlay.

Make a broad, flat seat. Do away with all rounded saucer-shaped effects in the seat of the cavity. Dove-tail on to the occlusal surface where it is indicated. Extend the cavity so that the margins may come in sound enamel; or remove the whole chalky or etched surface by means of instruments, stones, disks or strips down to where the enamel is normal and will make a clean, smooth margin.

Ever since Dr. Black, as a guest of this association three years ago,



showed us by lantern slides and called attention in his paper to this etched condition of enamel under the white chalky spots; and Dr. James, our last year's guest in Boulder, called our attention to the etched enamel condition with the staining method, I have been practicing more and more this grinding and polishing down of these surfaces to make good, clean margins of cavities—even to the extent of polishing out entirely some shallow gingival cavities.

There is a class of teeth, which very fortunately we do not find more than two or three times in a lifetime, in which the enamel is deficient throughout or seems to be lacking entirely sometimes. Of these teeth we could find no fault with the saying that they are too soft to hold fillings. Porcelain crowns, preferably the porcelain jacket crowns, are indicated on the anterior and gold crowns on the posterior.

''Ulcerated Ceeth.'' This is an expression which our patients sometimes use. This is not a very serious mistake, but one which keeps our profession from being quite exact. They often try to get us to subscribe to their

error by asking us the direct question after we have made an examination: "Doctor, is it ulcerated?" In almost all cases it may be answered truthfully without giving offense in something like the following language: "There is a condition here which is sometimes called 'ulcerated,' but not quite properly so; an 'abcess' is a better word for it." For when we consider the definition of an ulcer as "a suppurating surface," and an abscess as "a circumscribed cavity containing pus," we see at once that what they usually mean is an alveolor abscess. I say usually, for they sometimes mean a bad case of pyorrhea with the inner surface of the socket suppurating. Even then the tooth is not "ulcerated."

This is not written, thinking that the members of this association do not *know* better than to use the term "ulcerated tooth," but merely to remind us that our duty as teachers requires that we be a little more exact and take a little time to explain the difference between an abscess and an ulcer. When we hear physicians and sometimes even dentists using the term, we cannot blame the public from feeling encouraged—even justified—in using it also.

Another little error, which is not serious, is the habit some of us have of calling the "pulp" the "nerve." I can remember learning in the public school when quite young the different parts of a tooth as the enamel, dentine, cementum and pulp. I did not learn the word "nerve" in this sense, until years afterward. Then I learned it from a dentist, and several years later learned it to a greater extent in a dental school.

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While the mistake is not a very serious one, it certainly seems to be a state of retrogression, and it is. It seems humiliating to the dental profession to know that seventh and eighth grade pupils in the public schools, or even pupils in the fifth and sixth grades, have a more exact word for anything pertaining to our profession than some of us put into common use every day.

We lack something of making dentistry an exact science when we allow a loose nomenclature

Apropos the Oral Hygiene Movement.

There is another thing which has come up recently in connection with the oral hygiene or oral prophylaxis movement. This is a world-wide movement. It seems to have taken the whole world by storm within the last few years, and yet perhaps

the idea is only in its infancy. If we are to accept the statements of Dr. Ebersole, chairman of the Oral Hygiene Committee of the National Dental Association, and others writing on the subject, it is perhaps one of the greatest movements in the matter of benefiting the human race that has ever been started. We are all helping the movement. Physicians and educators all over the country, or all over the world for that matter, are advocating it. And yet I would like to ask seriously: Are we, as a profession, prepared for it? Are we able to meet the demand which we are trying to create for oral prophylactic work? Outside of a few exceptions, which are mostly in the larger cities, it seems to me that we are particularly weak along this line.

It is easy to imagine the following conversation which might take place in almost any dental office in any part of the country:

"Doctor, I have been very much interested in the literature you fellows are sending out on oral prophylaxis. What do you mean by it?"

"Well, I suppose we mean what the word prophylaxis means."

"That means preventive. Doesn't it?"

"Yes."

"Do you mean to tell me then, doctor, that it is possible to so treat the mouth as to prevent decay of the teeth and pyorrhea?"

"Yes, we can at least come very close to it, if we cannot do it absolutely."

"With the mouth in such a condition, would it not result in keeping the whole alimentary tract, and incidentally the whole system in a more healthful condition."

"It undoubtedly would."

"This sounds mighty good to me, doctor. I am here ready for you to begin this course of treatment on me. How do you propose to do it?"



It is not the purpose of this paper to answer that last question; merely to ask it.

If there was one thing in Dr. James's paper, which he read to us last summer in Boulder, more prominent than everything else, it was the phrase: "Putting the mouth in an *immune* condition." He used this phrase over and over until it was bound to stick. This "putting the mouth in an *immune* condition" is certainly the ideal thing to do, but are we as a dental profession at the present time able to do it?

The only question in connection with this oral hygiene movement I wish to raise is: Are we educating and training ourselves to meet the demand we are creating?



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New Jersey State Dental Society—Forty-second Annual Session. Morning Meeting, Wednesday, July 17th.

The forty-second annual meeting of the New Jersey State Dental Society was held at the Hotel Cape May, Cape May, N. J., July 17, 18 and 19, 1912. Dr. Hawke called the meeting to order and introduced Rev. George L. Dobbins, D.D., of Cape May City, N. J., who delivered the opening prayer.

Dr. Hawke then introduced Hon. L. C. Ogden, President of the Board of Trade of Cape May, who delivered an address of welcome.

On motion a vote of thanks was extended to Rev. Mr. Dubbins and to Mr. Ogden.

At the conclusion of the roll-call a discussion arose concerning the status of certain members who had been, prior to this meeting, in arrears for dues, and incidentally the adoption of the minutes of the last meeting came up.

I offer the following resolution:

Dr. Ropkins. "Resolved, That the minutes of the Asbury Park Meeting be now adopted up to the report of the Committee on Membership, as made to the Society on Thursday evening, July 19, 1911."

The above resolution was regularly seconded.

I move to amend by inserting that the minutes of the entire 1911 Asbury Park Meeting as presented by Mr. Sackett be adopted.

After some discussion it was resolved that a recess of fifteen minutes be taken.

A recess was then taken.

On the reassembling of the Society, Dr. Baker withdrew his motion and Dr. Hopkins' motion was regularly put and unanimously adopted.

Dr. Hawke then presented the President's address, as follows:



President's Address.

Members of the New Jersey State Dental Society:

We have met in this beautiful Hotel Cape May for the purpose of holding the 42nd Annual Session of the Society.

It affords me great pleasure to welcome you to our meeting. 1 also extend a hearty welcome to the exhibitors and to our friends the visitors attending this Convention.

Our State Society is essentially progressive, and has always been acknowledged as the foremost Dental Society of this country.

In the past we have had every reason to be proud of what our Society has accomplished for the uplift of our chosen profession, and of its influence, which has been potent and far-reaching.

For many years we have been favored in having some of the brightest men in our profession as essayists, and our papers have been well discussed.

If dentists wish to know what is new in dentistry they come to our New Jersey meetings, and when they return to their homes they have absorbed some new ideas which make them better informed men, and as a result, they can better serve the public.

I did not say, patrons, because the dentist of to-day, if he lifts his sphere in life, which is necessarily large and comprehensive, exerts an influence which is for the public good not only in his own community, but also in the State and Nation as well.

Our New Jersey Society needs no defense from me and I am not here to make any apology in her behalf, nevertheless I wish to call your attention to the following pertinent facts:

A Few Accomplishments of the New Jersey State Society.

New Jersey was the first State in the Union to pass a law providing for free dental inspection of all the children in the public schools, which inspection is compulsory. This in part shows the influence of our Society in State matters.

The World's Dental Congress held in Chicago in 1893 had its birth, I am told, in an executive meeting of our Society, although our Society never received proper credit for it.

The first Committee to take up the matter of having oral hygiene properly taught in the public schools was appointed by our State Society, after having listened to an inspiring paper read by Dr. Atkinson of New York.

Our Society was the first dental association to have an exhibit in connection with a meeting. I believe it was the first to have dental clinics at its meetings.



An important work has been accomplished during the past year by one of our members. I refer to Dr. Irwin's Compilation of Dental Laws—Condensed.

This book has been revised and enlarged, containing 100 Consular Reports, reciprocity now in force, new legislation pending, etc. Our Society should endorse and officially recognize Dr. Irwin's valuable work.

Last, but not least in importance, our Society again took an advanced position when we created a fund for the care of our aged and indigent members, and appointed a committee to take charge of the work. Our State Society was absolutely first in this magnanimous work for our members gladly paid the additional one dollar a year in dues to support this fund.

As was stated previously, our Society is essentially a progressive Society.

The above facts are a few of the things which have been accomplished, and if they meet with your approval you certainly must give the "Old Guard"—and by that I mean those who have worked for years to achieve the results referred to—credit for what it has done to make and keep a progressive Society.

I mention these facts not boastfully, but that the younger men might know what we have been doing, and with the hope that when the control falls into their hands, as it surely will in the future, they will leave nothing undone to help maintain its present high standard.

Recommendations. It is customary for your President, in his address, to make some suggestions and offer some recommendations for your consideration. Our Registration and Examination Board is doing an excellent work, maintaining a high standard which is a credit to our Society. I trust the future in-

Last year it was my pleasure to appoint a committee to take up the matter of affiliation with the National Dental Association. This committee will report through its Chairman, Dr. Beam. I recommend that, if we deem it wise to do so, we take the necessary steps to become a part of that organization.

cumbent will continue to uphold this high standard.

In this connection let me also suggest that as many as possible of our members attend the National Meeting to be held in Washington in September.

I recommend that action be taken by this Society suggesting that our Legislature pass a law that will compel all cities of 50,000 or more in population to employ a dentist at a salary of \$1,000 a year, for six days' work of six hours each, to care for the teeth of its poor.

I recommend that the Permanent Committee on Oral Hygiene be em-



powered to select suitable lecturers to aid them in disseminating knowl-

edge of oral hygiene.

I am sure you will join with me in regretting the absence of dear old Dr. Stockton, who is too ill to be here. It is unnecessary to say that he has our best wishes for a speedy recovery.

I regret also to announce that during the past year three of our members have passed to the Great Beyond: Dr. C. P. Pitman of Freehold, Dr. Harry Kaufman of Rockaway, and Dr. H. A. Wise.

I thank you, gentlemen, for your attention.

On motion of Dr. Barry the address of the President was referred to the following committee: Drs. Gregory, Barry and Fish, with instructions to report at a subsequent meeting.

This committee subsequently reported, and a record of the report will be found in the proceedings of Friday, July 19th.

Dr. Watkins moved that the Secretary send a letter to Dr. C. S. Stockton of Newark, N. J., the only living charter member of the Society, who was prevented by illness from attending this meeting, telling him how much his presence was missed by this Society, expressing sympathy for him in his illness and wishing him a speedy recovery.

Dr. Jones seconded the motion, and in doing so moved to amend by adding that Dr. Stockton also be informed that harmony prevailed in the Society.

Dr. Watkins accepted the amendment and the motion was thereupon put and unanimously adopted.

The Secretary presented a communication from Dr. Thomas Dedrick of the Peary Polar Exploration party, who was to have read a paper at this meeting, entitled "Meningitis," stating that he would be unable to attend.

On motion the communication was received and ordered placed on file.

The Secretary then presented the resignation of Dr. Edwin R. Westervelt of Jersey City, which, on motion, was accepted.

The Secretary read a communication from the National Committee on Dental Legislation enclosing a copy of the proposed national dental bill, and requesting the appointment of a committee to prepare resolutions on the subject.

On motion, the communication was ordered received and placed on file.

The Chair appointed as such committee Drs. Hopkins, Beam and Kussy.

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The committee subsequently reported during the proceedings, and the report is as follows:

Report of Committee on Patent Legislation.

We, the undersigned committee appointed to consider the Dental Patent Bill, known as House Bill number 20,591, beg to report as follows:

We recommend for your consideration the following resolution: Resolved, That the New Jersey

State Dental Society in convention assembled at Cape May, New Jersey, July 18, 1912, do hereby heartily endorse all the provisions of said bill and recommend that the Secretary of the Society be instructed to convey our action, under seal of the Society, to the Chairmen of the Senate and House of Representatives Committee on Patents, the Honorable Norris Brown and Honorable Wm. Oldfields, respectively.

We further recommend that a petition be drawn and signed by all members of the dental profession here assembled soliciting the aid of these committees in the support of the bill.

R. S. Hopkins, Joseph Kussy, Paul F. Beam.

Dr. Watkins.

I move that a committee be appointed to suggest nominations for the Annual Election.

The above motion was seconded.

After some discussion Dr. Watkins withdrew his motion.

On motion, it was resolved that Dr. Stryker be requested to read his paper at the afternoon session.

On motion, adjourned until 2 o'clock P. M.

Evening Meeting.

Dr. Hawke called the meeting to order.

Dr. Fawke.

This afternoon we had the pleasure of listening to a paper by Dr. George H. Wilson, of Cleveland, on Prosthetic Dentistry, and we will now proceed with the discussion. I will first call on Dr. John Meyer, of New York City.

Discussion of Dr. Wilson's Paper.

Dr. John B. Meyer, this paper the title naturally suggested something of a practical character which would possibly give me something to accept from the experience of the essayist as an advance in dental prosthetics, or perhaps afford me an opportunity of advancing some criticism, and thus fulfill the object of a discussion.



I was disappointed, however, to find no mention of methods pertaining to this subject, and as I am essentially a practical worker, I feel reluctant to enter upon a discussion, having no definite end in view.

In 1866-67, when there were but 258 dentists on Manhattan Island, with a population of 830,841, there were two specialists in prosthetics, namely, Dr. John Allen and Dr. Samuel Benson. At the present time, with a population of 2,413,467, we have 1,793 dentists; and it has been said that I am the only acknowledged specialist in the field. Then the patients could be turned over by the operative dentist with full confidence that their needs could be taken care of.

To-day, however, there is a trend in the direction of concentration, and the modern dental office gathers together under one roof a combination of specialists, so that all branches may be controlled; or the operative dentist or general practitioner, with the aid of the commercial laboratory, so-called, is able to supply the average cases of tooth substitution, either plate work or crown and bridge, by simply taking impressions, trying in the teeth, to satisfy himself as to the esthetic and practical fitness of the case, and then have it completed in the laboratory. All the mechanical details are done outside of the dentist's office. This method of practice has been made possible since the establishment of commercial laboratories, and they have proved a valuable aid to the general practitioner. I agree with the essayist that there is no accepted line of demarcation between the several specialties, for they seem to merge into each other; or I might add, the commercial laboratory may serve as the connecting link between them.

In the struggle for existence the conditions demand that every reasonable effort be made to eke out an income and to let nothing escape that may be turned to profitable account, so the general practitioner turns his hand to every department with varying success, as he may or may not be master of the situation.

The prosthetic specialist can only expect the profession to refer to him such cases as cannot be handled successfully by the method above described, and it is for the specialist then to show that he is capable of securring results where others have failed. While liable to the accusation of "exaggerated ego," he should be dogmatic enough to assert and to feel that he can fit any mouth with an artificial denture, and to know when he has so succeeded.

Incidentally, it may be stated that one qualified as a prosthetic expert is competent to do crown and bridge work, for he is accustomed to direct contact with patients and has the technical skill and superior mechanical attainment to perform any of the modern restorative operations. In dealing with his own clientele it is optional with him how broad a field he shall undertake to cover.



I am of the opinion that the student receiving laboratory training under the preceptorship of a man of recognized ability is better equipped to enter upon college work, to assimilate its teachings and to apply them, than the one who acquires all his practical knowledge in a college course.

I enjoyed this paper very much. It was a very

Dr. S. G. G. Watkins. scholarly one and covered the ground very generally, and I was glad to see that someone in our profession had the courage to come before a dental society like this and read a paper on prosthetic dentistry, which seems to be a subject almost neglected and forgotten, one might almost say, by the dental profession.

There seems to be a feeling in the minds of graduates when they leave college that they will never do prosthetic dentistry; they are going to be operative dentists. Many of them could make a very much greater mark in the world, and perhaps do more good, if they gave more attention to prosthetic dentistry and less to some of the other branches.

One statement of the essayist was concerning the dentist's duty in setting up artificial dentures. He stated, and I wish heartily to agree with him, that dentists should set up the piece before they send it to the laboratory man. In a very large majority of the cases of artificial teeth, the way they are handled to-day, the dentist will take the impression, the articulation and the color, put them in a little package and hand them to the laboratory man, or send them, as the case may be, saying, "Dear Dr. Jones, kindly make up a set of teeth size 13, color 23, and have them in my office to-morrow at II o'clock"; and, as a rule, they are there. The laboratory man, in making them up, knows nothing, or very little, in regard to whether they are for a person tall, lean and lank, or short and stout: whether for black or white, man or woman. The teeth are made and returned, and the next day they are placed in the mouth. That is, I think, a fair statement of the way the majority of artificial teeth are made to-day, and I think it is very largely due to the training the young men get in college. There is not enough emphasis placed on this subject in the college and the men graduate with very little respect for the prosthetic dentist.

I believe in specialization; it is a good thing for each dentist to have some specialty, and if a man will make a specialty of prosthetic dentistry he certainly can carry out his work with very much better results than by doing it in a haphazard way, mixed in with other work and without any special thought.

The essayist put a good deal of emphasis on the esthetic part of the work. That, we all know, is a very important part. Everything should be studied from the beginning to the ending, especially in getting the articulation and in the setting up and arranging of the teeth and restoring



the proper contour of the face, and the teeth should be so arranged that they will look as though they belonged to that particular face, so that attention will not be called to them; so as to deceive, and so that no one will have the thought, "That lady wears artificial teeth." That can be done if time enough will be spent on it, and enough of the artistic element and esthetic taste exists in the operator.

The matter of taking the bite was referred to in one of the papers to-day—I have forgotten which—and I think the word "mush-bite" was used. I do not know what the gentleman had in mind in using that term, but in taking the bite care should always be used to brace up the base plate in such a way with wires that it will not spring, but retain its position in such a way that it will go back on the model exactly as it was before taken from the model and put in the mouth, and if it is properly wired it will do that; otherwise the base plate will spring out of place to such an extent that you cannot be sure of your articulation.

Of course, the taking of the impression is the first and the most important step, but as that matter did not enter into the paper today, I will not touch upon it.

I am not in a position to discuss the paper, alDr. M. R. Brinkman. though I am very much in favor of dentists doing their laboratory work more than they are doing it today. I can truthfully say that in the last fifteen years of my practice I have but very seldom transgressed and sent work out of my office. I have great pride in doing my own laboratory work, and I would like to see my friends do the same thing and more of it. There is a great deal to be worked out, and they shirk it for the simple reason that they may soil their hands. But they should not think that; they should be willing to put their shoulders to the wheel and work with a will to elevate the status of prosthetic dentistry.

Dr. H. L. Wheeler, New York. It was my misfortune not to be here and hear this paper, but I have the good fortune to be personally well acquainted with Dr. Wilson and with his methods, as he has recently published a book on pros-

thetic dentistry which is the best book extant upon that subject, in my opinion. It is a book you should all have in your office and you can consult it very often with advantage to yourself.

I understand that Dr. Wilson's paper had to do with the specialization or differentiation of the various subjects or divisions of prosthetic dentistry, and while, as I said before, I do not know what he said, my experience from a considerably long acquaintance with Dr. Wilson and from a fairly good knowledge of his written papers and his books is that he is well equipped to deal with the subject; and, judging from my knowl-



edge along these lines, I think those of us who missed this paper missed something that it would have been to our advantage to hear.

I regret I am unable to discuss the paper more specifically.

I desire to say, in reply to some remarks made by Dr. Watkins, that in the college which I have the honor to be associated with the dignity and the respect of the prosthetic dentist is very thoroughly taught, and that it is my constant endeavor to urge the men to give greater attention to that subject. There is nothing in the whole field of prosthetic dentistry which the man who has the degree of D.D.S. or who is in the practice of dental surgery need to apologize for being interested in, and in spite of dental hygiene or oral hygiene, a subject which I think I am fairly well posted on, too; in spite of the teachings and ideas that are being put forward on that subject, we will long be forgotten before the day comes when prosthetic dentistry will not have its place in the dentist's office.

Dr. Wilson. I do not know that I shall take much time in discussing this subject further. I am very glad there are some who are interested in the subject and willing to discuss it, because prosthetic dentistry is not a favored subject with us and many of us handle it as best we can to get rid of it.

In the early days prosthetic dentistry was the great branch, and every man was interested in it because he must do that work. To-day he is getting rid of it, so that the men who had the ability are dying off.

We have few men left like Dr. Watkins, who love this work because of the training they had in early days. And what will it be in a few years more, when we older ones have passed away, if it is not looked after in the colleges and developed? The profession is going to suffer because of the bad work that will be done in a few years from now in this special line of work.

As to the laboratories doing the work, they were not the cause of the condition; they simply came into existence because of the condition. They should not be blamed; they are doing the best they can. The laboratory man, I wish to repeat again, has no use for esthetics; he has no use for the artistic sense; he cannot use it. In order to use the artistic sense one must see the patient, study the patient; and if the patient is a thousand miles away how can he do that? He can do it mechanically. There are many of our laboratory men doing finer mechanical work than some of us who are specializing, but it is not artistic at all. It is made to be suitable for Jones and goes into Smith's mouth; and the mechanical man has no way of knowing about that, so it is a mistake to say the mechanical man should have genius in the way of an artistic or esthetic sense; he should be a high-grade mechanical man. (Applause.)



Chursday, July 18th. — Morning Meeting.

Dr. Hawke called the meeting to order.

On motion the calling of the roll was dispensed with.

Dr. Hawke then called upon Dr. Herbert L. Wheeler, President of the First District Dental Society of New York State, who read a paper which appears in this issue.

Discussion of Dr. Wheeler's Paper.

Dr. W. D. Cracy, New York. I am very glad to be here and hear Dr. Wheeler on the dental nurse problem. Through some misunderstanding I have had the idea that he was not in sympathy with anything which would make the den-

tal nurse possible. That was through some conversation I had with him some year and a half ago. But this paper is a very important and timely one and lays down for us some thoughts that are of great importance and very necessary for consideration before we can go ahead with this problem, because it is a problem we must all face. We must find some way to make it possible, and I am glad to find Dr. Wheeler arrayed on the side that will advocate and work for the establishment of the trained dental nurse.

Mv own feeling in the matter has been that the dental nurse is a necessity, not for the profession merely, but for the public. If the dental profession intends to rise to the emergency, or arise to the necessity which it faces in dealing with dental caries as a public ailment, they must have help; they cannot do it single-handed. Men who have worked in public clinics and private clinics and charitable clinics have all decided that they cannot alone cope with the needs of the school children in any large community. They must have trained assistance of some sort, and it is now really up to the dental profession to find out how that shall best be done. Dr. Wheeler's suggestion that the nurses may be trained in hospitals where there are dental departments would be ideal if there were hospitals having well-established dental departments. But we all know such hospitals are very few, and personally I know of only two or three where nurses could be trained in a dental department which is well organized. One is Bellevue Hospital in New York City, and the Massachusetts General Hospital is another. We must find some other way, because if we only have two or three such hospitals we would be so slow in making progress that it would not be practicable.

Craining of Nurses.

It seems to me the dental nurses could be trained in the dental colleges. The dental staff of a dental college, by conferring together, could establish some course which would properly train the dental nurses.



equipping them by such training to do the things which later will be decided by law as wise for them to do. Moreover, it seems to me that in the beginning such training ought necessarily to be quite limited; that is that the nurse ought to be limited in her field. I say "her" field because I think we all intuitively think of a dental nurse as a female nurse, and the suggestion Dr. Wheeler makes that the male nurse would be a poor proposition is a good one. The privilege of working in any part of the dental field by a man not a dental graduate, might be sought and taken as a short cut to get into the real field of dentistry. If we do have a limited course for female nurses and train them as dental nurses, it seems to me they could be and would be a very great help to the dental profession in rising to the position where we can take care of our public. We are public servants and we are supposed to be helping the people to care for their dental health and welfare; and we are doing this; we are doing it largely, and there has probably been no criticism of the dental profession in private practice; but we are not doing public work as we should, and unless we measure up to our possibilities in the next five years I am afraid it will be greatly to the discredit of dentistry.

Another point that Dr. Wheeler mentioned was that some dentists had advocated the dental nurse as a means of enlarging their own income by being able to do more work; to see more patients and turn out more work. That view of the matter had never occurred to my mind. It had seemed to me it was a bigger thing than that; that it was simply the dental profession's interest in caring for the public that was prompting this enterprise; but perhaps that is because I am a little narrow about it and have not seen the abuses Dr. Wheeler has. I should regret to feel that the profession as a whole would promote a scheme of this kind, to establish dental nurses solely for their own profit. That had not occurred to me before.

Limitation of Dental Hurses.

Regarding the limitation of the dental nurse, that is something that would have to be decided, I presume, by a conference of college professors and State Board officials. They are the men who are in the

position to decide just how far the dental nurse should be permitted to go in performing services for the public; but I think that could be decided without any great difficulty. I think the intelligent men who are on State Boards could get together, and the concensus of such bodies should be taken and a set of rules and regulations for the control of work as done by the dental nurse could be formulated.

In regard to the examination of the dental nurses, it has always seemed to me that dental nurses would naturally come under the board that regulates the licensing of the general medical nurse; and Dr. Wheeler



explained to you that these boards are usually made up of medical nurses who, through their special ability, have risen to the top of their profession, and they constitute a board of examiners for the licensing of trained nurses. It would be, it seems to me, quite a simple matter to instruct these nurses who are in control of the licensing of medical nurses, as to carrying on examinations of dental nurses. It seems to me that, knowing what they do as medical nurses, they could readily be brought into line in such a manner that they could control the dental nurse proposition; that is, they could have the dental nurse come before them and submit to an examination which should be decided, perhaps, by State boards also, and in that way control and issue licenses for dental nurses.

It is fortunate we have had this paper read now, because it will set men thinking, and I hope that you live men in Jersey who have shown such splendid interest in dental clinics and public welfare, will take this matter up this year and do some work on it, and show where you stand on the dental nurse proposition. I believe it is a subject worthy of your careful and close attention, and I hope you will advocate it and work for it and help the profession to accomplish this thing, because the dental nurse is a crying need in the present day. That is my opinion.

This is a matter to which I have not given a great deal of thought. It has been agitated in our New York.

New York State Society and in the Connecticut State Society, but it appears to me they are starting in at

the wrong end. It is true, Dr. Wheeler, that we must come to the dental nurse. Now, then, what is the easiest and quickest way? What does the law require in our State? If you start a dental college or any other kind of educational institution you must formulate some curriculum; you must arrange that beforehand. We have no way to educate the so-called dental nurse in the State of New York, and before you can arrange a curriculum for a school of that kind you must get your permit from our State Legislature, and also from the Board of Regents. The way to start this movement is to appoint a committee and let that committee formulate a curriculum, a line of study that the nurse will have to pursue; then one of our sections in the First District Dental Society will take it up, teach these dental nurses, and when we think we have them efficient enough we will have something to go to the Legislature and the Board of Regents with and say, "That is what we want; that is how it can be done." That is the only way to get trained dental nurses. Go up to the Legislature with something tangible, or you will never get what you want.

I will give you a little incident of what happened recently in another line of work, to show what can be done if you go to work in the right way.



There is a so-called school of chiropody in New York City. They have done much labor for a long while to elevate their standard, but until they advised with some of the medical men and one of the Board of Regents, they never were able to make any progress. To-day they have a school of chiropody that is recognized by the Board of Regents of our State.

But the first thing to do'is to get together a class of women who are perfectly willing to take these positions and to spend a certain amount of time and study; and the next thing to do is to get the people who can properly teach them, and the best way I know of up to the present time, there being no dental hospitals, is to teach them their duties in one of the sections of the First District Dental Society of our State.

Dr. George Evans, New York.

I am a good deal like Dr. Walker on this subject, for I have not given it very much consideration. But I have a very pronounced opinion, and it is just this, gentlemen: Are you going to take out of the

profession the treatment of pyorrhea? You cannot measure the line of work these dental nurses are going to do. What are they going to do? They are going to do what you call cleaning the teeth and preparing the mouth, and that actually means the treatment of pyorrhea. Are you going to have instrumentation? I believe the sphere of the dental nurse is limited and you cannot include anything that will allow instrumentation without making it to a certain extent a surgical operation; and you are going to take out of dentistry a large amount of work that it is now engaged in. No woman can treat pyorrhea unless she has received education on that particular branch, and it will take her a long time to learn to do it properly. The treatment of pyorrhea means the treatment and scraping of the roots up to the apex of the tooth, away up to the alveolar portion, and a certain amount of treatment of those parts. I have been treating pyorrhea more or less for thirty years, and I did it twenty-five years ago almost exactly as it is done now, and I know it takes a great deal of practice and skill to properly treat pyorrhea.

There was something said here about examination of the mouths of children and all that sort of thing. Do you consider that a dental nurse is competent to examine a child's mouth and decide just exactly what should be done in cases of caries, etc.? I do not think these women will be qualified alongside of an educated and qualified dentist to pass upon those questions. As a matter of fact, I do not consider we have enough study to-day, and I do not believe anyone in this room is thoroughly qualified to practice every branch of dentistry.

Take orthodontia. I do not know much about it. I know how it is done, and if I were put on a lonely island in the Pacific Ocean I might treat a patient if I had to, but I would not think of doing it alongside of a man who has made a special study of it.



Now you propose to take a woman and give her a meager education of a year or so, and put her in an office and set her to work cleaning teeth, etc.—and that means treatment of pyorrhea—and you are not going to be able to limit her in a proper way.

The whole question on this subject depends on what is to be the limitation of these dental nurses, and if you do not limit it and limit it well, beware! You will get into trouble.

Another nice question is, "Are these dental nurses going to be entitled to practice, to be allowed to put out a sign as practicing a specialty in dentistry, like a chiropodist does as to the feet?"

It simply means this, that there are a few men who think that the cleaning of teeth is a little beneath them, and there ought to be a female assistant or nurse come forward and clean the patient's mouth, just as patients in the hospital are washed and given a bath and an injection and all cleaned and fixed up for the surgeon next morning or some other time. That is all right if you will limit the cleaning of the mouth by the nurse without instrumentation, simply using an ordinary common scraper, not pyorrhea instruments, or doing things like that, or just putting a little dressing on the infection of an abscessed tooth, and specifically limit it and not give them any right to put out a sign and practice for themselves, and put themselves directly under the supervision and control of a practicing dentist—then, all right. License your dental nurse; but if you don't, beware! That is all I have to say.

Gentlemen, this is a problem to which I have not Dr. S. G. G. Watkins given very much consideration, but I believe the dental nurse is a valuable adjunct to the dental office; but perhaps I look at it in a different way from many of our highly theoretical and esthetic gentlemen in the profession. I am afraid I look at it in a more selfish way. I think the dental nurse is a good proposition to help the dentist to earn money. I think perhaps the dentist as a rule is not enough of a financier and is not looking out for his own pocket quite enough, and I believe the dental nurse will help him to do that. He can use her in many ways in doing little things, such as Dr. Evans has described, which will save much of his valuable time; but as far as going into the treatment of pyorrhea and the more difficult operations, I have my own doubts about her being available. But in the other way of which I speak I am a thorough believer, and we should all try to enhance our income, and I believe it can be done in that way perhaps almost as well as in any other way.

Speaking of increasing our income reminds me that at one time in Brooklyn Dr. Kells of New Orleans was invited to read a paper before the Second District Dental Society. When the President called upon him



he pretended he had made a mistake in his subject and had written a paper on the wrong side of the question. The subject he was invited to read a paper on was, "How Shall We Increase Our Income?" and he went on to make quite a long statement, as if he was not aware of the true subject he was to speak on until he reached Brooklyn, and then he pretended that he had taken himself off to a quiet place and prepared quite a voluminous paper on the subject. He had in his hands a great volume of paper and fussed with it and worked to get it into shape, and we all supposed we were going to listen to a paper about an hour long; and finally he said, "Gentlemen, in order to increase your income it is necessary for you to work like the devil and double your fees," and stepped down and took his seat. We all looked up in amazement, and after a while the audience comprehended that that was all there was of his paper and that ended it.

And I feel that way about the dental nurse—it is a good way to increase our income; and I believe a good deal of time can be saved with a well-trained woman in the office. There is no greater help.

Boston, Mass.

I do not think I can add very much to what has Dr. Waldo Boardman. been said. I understand Dr. Wheeler has the proposed Massachusetts law here with him and I think he ought to read it, so that we can understand it bet-

ter. We had a bill there last winter before the Legislature and the bill was presented to a prominent lawyer in Massachusetts to put it in form, and a majority of the committee of the Legislature were with us. The bill was brought into the House and we threshed it out there and it would have gone through if it had not been, practically, for one man in the House; although the House was Republican and he a Democrat, he controlled the House, and it was not reported, on the ground that he had promised a certain dentist there, who had no great standing, to fight the bill.

That bill provided that the dental nurse could be employed in dental offices under the direct control of the dentist; that she should be licensed and registered and pay a fee of five dollars; that if she left one dentist and went to another it should be reported to the proper authorities and she be licensed again. The matter of the education of the dental nurse was, of course, not in the bill, but it was left to the Board to decide with regard to licensing the dental nurse; left entirely with the Board of Registration in Dentistry. The chief objection to it was that quacks would employ dental nurses, but I do not see that that is any objection, because quacks are already legally licensed and stand in the same position to the general public as we do. We cannot control them beyond that.



The essayist referred to Harvard with reference to preparing dental nurses for a position. Harvard has not taken any action yet; if the bill had gone through I think they would have acted. It has not been before our board at all.

The thought I have grew out of a statement Dr. C. E. C. Smith. made by Dr. Evans, who has, it seems to me, sounded the keynote on the subject of the educated nurse. It seems to me the position that the nurse will occupy in the dental profession will be very similar to where a patient is brought into a physician's office having measles, scarlet fever, syphilis or anything of the kind, and is taken and cleansed thoroughly by a nurse and then sent in to the diagnostician or physician to find out what is the trouble with the patient. If your patient is first taken care of by a trained nurse you want to beware that that trained nurse does not become a differential diagnostician, and you want to be mighty careful or that trained nurse will some of these days be practicing your profession and you will be nothing but a mere mechanic. That is the thought which grew out of a statement made by Dr. Evans, which I certainly second. I think if the nurse is to do the work proposed she would be obliged to go through the same curriculum as that required of a graduated dentist.

Dr. H. L. Ambler, M.Sc., D.D.S., Cleveland, O. The first paper I ever heard read on this subject, and which was afterwards printed in the *Dental Summary*, was written by Dr. Wright of Cincinnati, one of the professors of the Ohio Dental College, and he took the ground that it would be very advan-

tageous to have these nurses, and that they should have a license after they were trained, but just what their status should be and just how much they should be trained he did not outline. But he made this prophecy, that the dental nurse would surely come, and it seems to me that the agitation of this question will work out something good for the dental profession.

Dr. Watkins spoke of one matter which I can illustrate by saying that in Cleveland there are three men who practice prophylactic treatment of the teeth. That is their specialty; and these men have lady assistants, and one of those lady assistants of the first man who ever made a specialty of this branch in Cleveland was taken sick and for a time was out of the office. Thereupon the doctor secured a new assistant; this second young lady, when the first recovered, went into the office of a friend of mine as his assistant, and he told me she had been a great help to him in this way; that she had suggested to him and told him different ways and methods that the dentist practicing prophylactics who formerly em-

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ployed her had taught her, and in that way the dentist last employing her was able to increase his income without working any harder, because of the points he received from this young lady.

I have had no opportunity to examine Dr.

Dr. Alhponso Irwin. Wheeler's paper, but inasmuch as the President of this Society has invited me to make some remarks about it, I wish to acknowledge my admiration for the subject matter of that paper and to express my opinion, which is to the effect that the advocacy of the dental nurse is a step in the right direction, and that the ultimate introduction of the dental nurse into the office of the general practitioner of dentistry will occur.

The commercial aspect of this question, the esthetic aspect, the philanthropic aspect and also the legal phase of the subject have been presented to you this morning by gentlemen who are much more able to speak upon these subjects than I am.

I might possibly say some few words with regard to the legal aspect of the dental nurse, or the necessity for defining without the possibility of any quibble the limitations to the functions which that nurse should perform.

The alarm which has been sounded by Dr. Evans in regard to the danger which may occur from the establishment of the dental nurse, I think, has been exceedingly timely and well taken.

Furthermore, regarding the legal aspect of the dental nurse question, I think that is the most important phase of the whole subject. I think that this subject must be discussed thoroughly; that we must not be satisfied with the thought that the income of the general practitioner of dentistry will be increased by the addition of the dental nurse in his office, or in the infirmary or hospital. I think that the commercial side of the question should be eliminated entirely. The dentist is not graduated to make money alone, and the dentist who enters the profession of dentistry in this age with the sole idea of making money is making the biggest mistake of his life. Therefore, the financial phase, or the commercial gain to be derived from the acquisition of the dental nurse should be eliminated from the question.

As to the philanthropic phase, we must give it very careful consideration, for there is a time coming when the dentist must be what he claims to be, and that is, a professional man. He must take in hand that large proportion of cases which cannot come to a dentist, but require work done, whether it be simply to repair the ravages of caries, to treat disease or stay the spread of an epidemic which we now know can occur through the introduction of at least twenty-two different pathological germs in the mouth, which forms an ideal breeding-place for them. The



dentist must, from a philanthropic point of view, render succor to a very large percentage of humanity who must obtain relief, and it is he who must stay the progress of the epidemic. How can he better accomplish this work than through the offices of a properly trained dental nurse? The philanthropic view, therefore, in connection with the introduction of a dental nurse, is to be commended.

From the legal point of view, I think that before anything positive and final is undertaken in this direction, we must have a law which will not only be applicable to the State of New York, from which Dr. Wheeler comes, but also applicable to the State of Massachusetts, from which Dr. Boardman comes, and applicable to all the thickly populated States in this country where the lines are sharply drawn and where there can be no overstepping of bounds and where there can be no infringing on the profession, the practice, the surgical work of dentistry by the dental nurse.

Dr. Cuthbertson, Washington, D. C. I have not given the subject much thought, but I agree with Dr. Evans that we must be careful in what we are doing.

I think the examining of the nurse should be by the board of dental examiners and not by nurses or physicians, because the physician is not capable of examining a dentist, nor the general nurse capable of examining the dental nurse.

A dental nurse would be a great advantage to a number of us, provided the dentist thoroughly diagnoses the case and instructs the nurse what to do, just as a physician does; he sees the patient, makes the diagnosis, tells the nurse what to do and she does that, and that alone; and the giving of medicine or any treatment is only by direction of the physician. A dental nurse should be under the same control as a medical nurse and should do only what the dentist instructs.

The line of demarcation is very hard to draw, because some nurses will claim they can go further and do more than others. In some offices they attempt to do almost any kind of work now, even to the putting in of plastic fillings. So that, from a legal standpoint, it is going to be very hard to draw the line, and it is a matter that must be thought out very carefully; and I believe the dental boards of examiners are the only ones competent to examine the nurses.

I do not think there is any necessity for the Dr. David C. Baker, dental nurse, but Dr. Wheeler has said the work for the nurse is prophylactic. Now why is that necessary? Because the dentist himself does not care to do that work; he will not do it, particularly the man who has been in practice a few years. He has not had a thorough training in that line



and wants someone he can turn the work over to. If the colleges would establish a special course and make the student take at least six months in the treatment of pyorrhea, and so forth, when the student came out of college he could make just as much money cleaning teeth thoroughly as he could in any other branch of dentistry. The position is very well presented by the condition in the class organized by the First District Society, where mature men come and want to learn about the treatment of pyorrhea after practicing dentistry for many years.

When you come to draw the line and limit the work of a trained nurse I fear there will be much difficulty. If she is to treat a pyorrhea case and finds there is a continuous discharge, she or the man she is associated with come to the conclusion that there is either a dead nerve or some other condition of that character, and he is pretty busy, and so he tells her to drill into it and see what it is; and after she has done that he is still busy and says, "Well, now you might as well drill it out; you did that other pretty well." And she does that, and then he tells her she might as well put a little plastic filling in; and so it goes on, until it soon will be pretty difficult to tell how far the nurse can go.

You know how difficult it is to prosecute or stop an illegal practitioner in dentistry, and it will be a great deal harder in the case of a nurse.

The way to solve this question is to train the young men in the colleges thoroughly in the work, and, if necessary, make a four years' course; the last year in the infirmary or in practical work, or have it arranged so that they are compelled to go into the office of a competent man to do this work.

I think Dr. Wilson brought the idea yesterday of going back to the old apprenticeship. I think it would be a good idea, either before a man goes to college or after he finishes his theoretical course, that he should spend a year in doing actual practial work, and then he would not need any dental nurse.

Dr. Geo. Wilson, Eleveland.

I desire to correct the impression given by the last speaker that I suggested yesterday going back to the preceptor method of teaching. I said most emphatically, "No." The college is the systematized

way of teaching, and the only assurance we have that a man will have a proper training. With the preceptors it was a haphazard method, that never ought to be returned to.

Dr. Wheeler.

I have listened to this discussion with a great deal of interest, and I am going to attempt to answer some of the ideas advanced.



I want first to touch upon something Dr. Tracy spoke of. The question of whether we shall have male or female dental nurses will take care of itself, just as it has in the medical profession. Men who have been interested in the training of nurses in the medical profession for years tell me that the trouble with the men was that those who were worth anything and were interested in medicine would study medicine, and the type of man who would go in to be a male nurse was usually an incompetent and undesirable individual. Of course, that is speaking generally.

It has been found practical for the medical profession to have the examination of nurses in the hands of a special board of competent nurses, who are appointed like the medical and dental boards, by the Regents in New York State. And it seems to me something after this plan will have to be developed, if a body of dental nurses is to be organized.

As to who shall train the dental nurse is a question that will have to be arrived at by experience. It seems to me there are only two places where it would be possible to train the dental nurse with anything like the all-around ability required. That would be in the dental departments of the large hospitals, or in the dental colleges. I think, in the dental college that had no hospital connection, they would not be as well equipped to train the dental nurse as the hospitals that are already training regular nurses. In regard to what Dr. Evans has said, I agree with him that to produce a trained dental nurse with privileges that are now confined to the trained dentist is a dangerous experiment, and may complicate and increase the difficulties that the profession has to meet already in the matter of preventing the illegal practitioners.

However, I think the dental nurse is bound to come. It may not be immediately; it may be several years; but I think the best way to handle it is to get ready and prepare measures to try and keep them within the limits of the law. The suggestion of Dr. Evans that their work be limited entirely to operations done directly under the observation of the dentist who employs them I think a good one. I believe the Massachusetts bill which I have mentioned in my paper did make this provision, which was one of the best paragraphs in the bill.

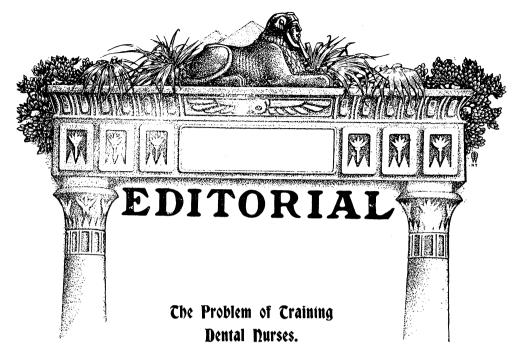
One thing seems to me perfectly patent, with the diverse ideas at present held by members of the profession and the egotism that we are afflicted with as a body: I do not believe that a dental nurse trained in a private office would be under any circumstances accepted and licensed by the Regents. The entire training, it seems to me, will have to be in an institution of responsibility properly organized for this purpose. It must be remembered that there is a very, very small portion of the dental profession that has any use for a dental nurse to-day. The plea that it will make dentistry cheaper to those who need it, I think, will prove to

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be fallacious. In my opinion, the trained and licensed dental nurse will increase the office expenses to a point where fees will have to be increased, rather than decreased, and it will only be those offices which are capable of obtaining large fees which will be able to employ the trained dental nurse.





A certain Angler and his Guide, during the past summer, had pitched their camp upon the shore of a lake where they knew that they could catch some trout. The trout were not reputed to be large. But they had heard of a pond about half a mile away from the main lake, and off the beaten trail. They had likewise heard that another Angler, only seven years previously, had captured a large trout in this very pond. With this promising prospect, the Angler and the Guide decided to fish in the pond instead of the lake, and they left their comfortable camp and their provender, and likewise their raincoats, for the sun was already warm in the noonday sky, and they hied them away to that little pond where they hoped that the big trout were hid. And as they tramped they wondered how large a trout might grow to be in seven years, anyway.

Now it came to pass, as it often does in fishing narratives, that the Angler and his Guide had made but a single circuit of the pond when the Angler captured a trout, a beautiful trout! Not too large, but large enough. Large enough, that is, to make the Angler anxious for another.

But he made many other circuits of that pond without meeting the close friend of that first fish. Thus, as is natural, he began to study

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the weather, for a reason why, as all true Anglers are wont to do. And he discovered that it was hot, and that it was very still; no day whatever for trouting. And so he uttered two prayers, one that a breeze might ruffle the water, the other that a cloud might obscure the sun.

And lo! the Lord of the Waters harkened unto his prayer, for over the western hills there was wafted a pleasant zephyr, and a pretty ripple spread across the pond.

"Ah!" said the Angler, "now we shall have some fine sport."

But the Guide turned his face toward the hills, sniffed and remarked, "I think we will have some rain."

Whereupon the Angler replied, "Nonsense! A little breeze like that will not bring rain."

But the Guide, still gazing at the hills, made answer and said, "Here come the clouds!"

But the Angler, without turning his head, retorted, "Wind clouds; just what we need to hide the sun."

The Guide said no more, but rowed his boat, as a good Guide should. But he noted the increasing strength of the wind as he pulled against it, and he observed the gathering clouds as he gazed at the hills, and presently he ventured: "Hear that thunder? We are going to have a storm. Perhaps we ought to break for camp!"

But the Angler insisted: "That is only heat thunder. We will go on fishing. I see no signs of storm."

Nor did he, for sitting with his face to his Guide, he saw only the sunshine in the east, his back being turned towards those western hills and the gathering clouds.

And so the Guide rowed on and said no more. But presently the sun was obscured and a great darkness crept across the pond; the rumbling thunders grew more resonant and more menacing; the wind died away to a most disquieting stillness, and at length the Angler could no longer deceive himself, and turning to his Guide, he said: "It looks now as though it might rain, but I think it is too late to make camp. What shall we do?"

The Guide answered not in words, but swiftly he headed for a high point of rock on the lee shore and deftly hauling the boat upon land,



turned it over, and he and the Angler, getting under the boat, were sheltered from the great storm that swept over them a moment later.

Here endeth the parable.

* * *

Che Dental

The situation in regard to trained dental nurses is much the same. We have been hearing for several years that the trained dental nurse must come, but many of the leaders in the profession have per-

sistently turned their backs upon the shadows which are ever cast ahead by coming events, and have ridiculed the notion.

One of the first of these to glance over his shoulder and then flee to the shelter of his boat seems to have been Dr. Herbert L. Wheeler. Dr. Wheeler has been counted an opponent of the trained dental nurse, and consequently he surprised his friends by reading a perfectly sane and sound paper, at the meeting of the New Jersey State Dental Society, in which he admits that the young woman is about to "arrive," and then very properly calls attention to the problems that must attend her advent.

Dr. Wheeler's paper aroused a great deal of discussion, a noteworthy feature of which is that many of the speakers began by stating, "I have given this subject very little consideration," then proceeding to make objections.

This dental nurse problem cannot be solved in this manner. The objections of men who admit that they have not studied the question are but as the prophecies of the Angler with his back to the weather signs.

There have been three questions involved in this problem. First: Shall we have dental nurses? Second: What training shall such nurses have? Third: Where shall they obtain their training?

The first of these questions has been answered. The young woman is almost with us. She stands in the bow of the good ship "Progress," and the vessel has already been reported in the offing. Only remains the nature of the welcome she is to receive. Shall we go down to the ship with the Port Officers and bring her ashore openly and legally? Or in the darkness of the moonless night shall we approach the ship in small boats and smuggle her ashore?

One of the foolish arguments of the objectors is that trained dental nurses will or may become illegal dental practitioners. These men

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(like the Angler in the boat, with his back to the clouds coming over the hills) fail to note that the trained dental nurse is already at work. Only, her present training is the haphazard teaching of individual preceptors and her status being one of possible illegality, she is working secretly, and the idea of evading the law is one to which she is daily becoming more inured.

There is one axiom well known to lawmakers and lawbreakers. Whatever becomes a public need the public will have, law or no law. And it is the wise lawmaker who formulates a law legalizing and regulating acts which otherwise would be secretly and illegally done.

Consequently the ship of Progress with the dental nurses aboard, being off shore, it behooves us to legalize their status before any more of them escape in small boats and go to work only partly trained.

What Craining Should Nurses Fave?

Massachusetts apparently is the first State which has attempted to formulate a statute legalizing and defining the trained dental nurse. Here we have a crisis which seems to be overlooked. At present we are struggling against the difficulty of

interchanging dental licenses, because of the fact that no two States in the Union have identical dental laws. Is this not absurd? With a few differences made necessary by local issues, our dental statutes should be fundamentally similar. And now we approach the enactment of the first statute providing for trained dental nurses. Is it not patent that this, the first act, should be so nearly perfect that it might be used as a basic model for other States to copy? Yet what do we find? Those who are fighting for the act are forced to frame a law which is but a weak compromise of what it should be. And why? Because a few stubborn men, who nevertheless have influence, project themselves across the path of advancement and stand like vitalized signboards shouting false prophecies, and pointing out the wrong way.

It is odd that a question should be so often asked, and so constantly discussed, when the answer is so clear and so easily read:

"What training should the dental nurse have?"

Answer: Her training should be such that she may serve the dental surgeon, and the dental hospital, in purely dental work, just as the medical nurse serves the medical surgeon and the medical hospital.



More specifically: The dental nurse should be trained to keep the operatory surgically clean. She should be capable of rendering the mouth and exposed surfaces of the teeth as nearly aseptically clean as possible, that the dental surgeon may receive the patient into his chair in a state as favorable for his operation as that in which the medical nurse places her patient upon the operating table for the general surgeon. She should have a sufficient knowledge of anesthesia to be a competent aid to the dental surgeon who may be called upon to administer anesthetics, and she should be able to render intelligent assistance in any emergency requiring artificial means of resuscitation. She should be able to attend the dental surgeon and help him in his work by a knowledge of his instruments, of his work, and of the instruments that his work may demand, and it should be her duty to deliver such instruments in a sterile condition. In actual surgical work, such as root amputations, removal of impacted teeth, and other similar operations, she should be capable of furnishing the dental surgeon with at least a "third hand"; as, for example, in holding retractors, etc.

Indeed, the sphere of the dental nurse is so analogous to that of the medical nurse that her limitations can easily be defined by all except those who are raising futile objections, and thus engendering false ideas and generally befogging the issue. These men constantly speak of cleaning teeth and treatment of pyorrhea as synonymous, when it requires but a moment's argument to indicate the error of such a position. If the cure of pyorrhea only required the cleansing of the teeth, it would be one of the simplest operations in dentistry, instead of being one of the most difficult. On the other hand, if there is any truth whatever in the oral hygiene preachments, if there is any potency in prophylaxis, then the cleaning of teeth means work in healthy mouths, that they may be kept healthy; and does not at all mean treatment of disease.

Where shall nurses be trained? Why, in training schools. Again we have but to look behind us for the answer. Dental nurses should be trained just exactly as medical nurses are, in hospitals that conduct training schools. The present difficulty, of course, lies in the fact that we have so few hospitals with dental departments, or dental hospitals sufficiently large to undertake the work. But

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the Forsyth Dental Infirmary will be one ideal place in which to establish a training school. Hence it is most fitting that Massachusetts should quickly enact an enabling statute. Moreover, the Forsyth Dental Infirmary will prove a failure without the aid of the dental nurse. Dental clinics are springing up, mushroom-like, over all the land, and all are blindly following the same fallacious methods. There is so much real dental work found that the operators in all these clinics are more than occupied treating dental disease, and the prevention of dental disease is neglected. It is necessarily neglected because there is no one to do the pophylactic work required. Thus the tide streams on, swamping the clinics with treatment, while nothing is done to stem the flood at its source.

With clarion voice we are telling the people, "Clean your children's teeth, and minimize the ravages of decay." We found clinics, and when the children are brought to us we are so overcrowded with the work of dealing with existing disease that we have no force with which to contend against the enemy. We do nothing, and can do nothing, to accomplish that very work which has become the slogan of our clan. We do not clean all those children's teeth, because we have not had the time. Yet the dental nurse, if we only had her, could do this. She could be busy all the day cleaning the teeth of little children. And these tots do not have pyorrhea, that awful bogy which the nurse's opponents are parading ever-at the head of the procession. We are preaching that these children's teeth can be saved by prophylaxis. The dental nurse, bless her! could do this work. Yet there be men who sneer "The dental nurse! Damn her!" For shame, you who would be consistent. To preach the saving of children, and then to hurl nothing but rocks at the chariot of salvation.

Hence the ultimate place for the training of dental nurses will be in the great public clinics, infirmaries or dental hospitals, call them what you please. The graduates of these institutions will make valuable assistants for these and for private practitioners who may require their services. But these latter will be but a small proportion at first, though as the people become more and more educated up to the advantages of periodical and regular cleansing of their teeth the trained dental nurse will become more and more in evidence as a necessary adjunct of a dental office, and without any danger whatever of her essay-



ing general practice. Though if she should, a properly drawn law would make the remedy easy.

W. W. Walker's Proposition.

In the discussion of the aforementioned paper by Dr. Wheeler the most notable proposition came from Dr. William Wallace Walker, who is undoubtedly one of the best executives in the dental profession. Largely through his efforts the First Dis-

trict Dental Society has been built up into the best organized society for dental study and advancement in the world. Several study sections are in successful operation, and now Dr. Walker suggests that a Section on Trained Dental Nurses should be formed.

It is a splendid idea, promulgated at the psychological moment. class might be formed of about ten young women, and a volunteer faculty could be found to deliver lectures, while a small dental clinic could be started in which nurses could have opportunity for clinical work in cleaning teeth. Unlike the other dental clinics which do not find time for tooth cleaning, nothing should be done in this nurses' class clinic except the cleaning of teeth. Indeed, the neglected overflow from other clinics might be sent to this class of dental nurses, who, of course, would be operating under the guidance of a corps of dental practitioners. In due time these nurses would be ready for graduation, but under the laws of New York such training could not be followed up by the granting of diplomas. But with an experimental class of this kind, we could attract the attention of the Board of Regents, and ultimately a regular training school would be organized, and a law passed regulating the licensing of trained nurses. In the meanwhile these young women trained by the First District Dental Society would readily obtain positions, and when a licensing law might be passed they should be allowed to apply for examination and license.





Dr. Joseph P. Root.

Dr. Joseph P. Root, the distinguished editor of the Western Dental Journal, died at ten o'clock on September 4th. Dr. Root was an ardent lover of golf, and whilst playing on Saturday, August 31st, was struck by a ball, and on account of the severe pains, obliged to leave the links. He was taken to the German Hospital where he was operated upon for strangulated hernia. He did not rally from the operation and gradually became worse, until death relieved his suffering.

His death, occurring as it did, just before the meeting of the National Dental Association, produced not only a shock among his friends in his own State, but was whispered about in awed tones in the lobbies of the Convention at Washington. There were few men in dentistry as popular as "Joe Root," who always had a glad smile and a pleasant word for everyone, and his loss occasioned many expressions of sadness and sorrow among those that knew him.

"Dr. Root was born in Wyandotte in 1862. His father, Dr. J. P. Root, went to Wyandotte in 1856, and was prominent in the early and trying days of Kansas. He was a member of the territorial legislature, and was first Lieutenant-Governor of the State, and Minister to Chile under President Grant. The son, Joseph P., was married to Keturah Waite, and the wife and two sons, J. P. Root and Paul Root, survive.

"He commenced the study of dentistry in 1880 with Dr. C. B. Hewitt, and graduated in the first class in the Kansas City Dental College in 1883. After practicing in Kansas City, Kansas, for some years he moved to Kansas City, Mo. While in Kansas City, Kansas, he was a member of the Board of Education for three years, and Secretary of the State Board of Dental Examiners until his removal to Kansas City, Mo.

"Dr. Root joined the Kansas State Dental Association in 1887, served as Secretary for two years and was then elected President for 1896, and re-elected in 1897.

"Dr. Root rapidly became prominent in dental circles and greatly aided professional advancement in the Western States. He was the



originator of the great interstate meeting at Excelsior Springs, Mo., when he was President of the Kansas Association in 1897. He has contributed many valuable papers to the profession. Notable among them are the following:

"'Undue Haste,' 'The Horrors of Dentistry,' 'Idiosyncrasies,' 'Dental Education,' 'Modern Methods,' 'President's Address,' 1896; 'President's Address,' 1897; 'Ethics,' 'Abuses in Dentistry,' 'State Boards and Their Duties,' 'The St. Louis Congress,' 'Amalgam Fillings.' These essays are only a few of the many which Dr. Root gave to the profession. As Editor of the Western Dental Journal since 1906, he has each month furnished editorial matter which has attracted much attention for its worth, and because Dr. Root always introduced in his writing a naive humor which was characteristic."

In 1893 the great Odontographic meeting was held in Chicago, at which over two thousand dentists were gathered together. Nearly a thousand of these were entertained at a banquet in the great ballroom of the Auditorium. It had been planned that but four responses to toasts would occur—the North, the South, the East and the West. Dr. Root was selected to respond for the West, and no more brilliant after-dinner speech has ever entertained an audience of dentists. It was filled with eloquence and punctuated with wit of such a character that epigram followed epigram in startling succession. Those present rose to their feet and cheered him to the echo. From that time on Dr. Root was one of the most sought after of all the dental writers and speakers in the country, and hundreds of men who knew him well, while sorrowing over his loss, must nevertheless feel that their own lives were bettered by having known him.

Dr. Charles S. Stockton.

Resolutions on the death of Charles Stacy Stockton, D.D.S., by the Central Dental Association of Northern New Jersey:

Whereas, Dr. Charles Stacy Stockton, an honored member of this Society, having been removed from us by death, it is fitting that we should make record of the event and of our sense of the great loss thus sustained; therefore be it

Resolved, That by the genial disposition, honorable character and enthusiasm in his chosen profession he has endeared himself to his associates and won their lasting esteem and affection by his untiring efforts in their behalf and for the advancement of dental science.

As a wise counsellor, true friend and earnest scholar he will never again take part in our proceedings; never again will the warm grasp

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of his friendly hand be felt; no more will his words of wisdom be heard, nor will his cheering smile again brighten our gatherings.

Resolved, That our sympathies and condolence be extended to his family in their bereavement. While such a loss is irreparable, we cannot but be grateful to the Giver of all good that he was permitted to live such a long and useful life. Be it further

Resolved, That these resolutions be incorporated in the minutes of this Society and that a copy be transmitted to the family of the deceased, and also the dental journals.

S. C. G. Watkins, Chas. A. Meeker, Chas. W. F. Holbrook, H. S. Sutphen, Ralph Waldron,

Committee.

At a special meeting of the Odontechnique Society, held September II, 1912, announcement was made of the demise of the Dean of the Dental Profession, Dr. Charles Stacy Stockton. The following minute was read and unanimously adopted:

"Though admonished by his advancing years, and by his physical ailments, that the end of a well-spent life was approaching, the loss that the Dental Profession has sustained, is none the less most keenly felt.

"Although not a member of our Society, his activity in our profession claimed him a friend to all that had the honor of his friendship or acquaintance; one of the founders of our State Society, and an active member of many organizations, both civil and professional, he showed his keen interest in all matters pertaining to the welfare of humanity.

"His efforts, his example, his advice, his encouragement was an influence of much good to the young man entering upon his career in the dental profession.

And so we in conjunction with all other societies and organizations, desire to express our sincere appreciation of the loss sustained by his family, by the community, and by the Dental Profession in the death of Dr. Charles Stacy Stockton. And be it

"Resolved, That a copy of the minutes be sent for publication to the ITEMS OF INTEREST, Cosmos, Dental Scrap Book and New Jersey State Journal."

Newark, N. J., Sept. 11, 1912.



SOCIETY TO ANNOUNCEMENTS

National Society Meetings

NATIONAL DENTAL ASSOCIATION, Kansas City, Mo., July, 1913.

AMERICAN SOCIETY OF ORTHODONTISTS, Chicago, Ill., July, 1913.

Institute of Dental Pedagogics, Pittsburgh, Pa., January 30, 1913.

National Dental Association.

At the meeting of the National Dental Association, held in Washington, D. C., the following officers were elected:

President, Frank O. Hetrick, Ottawa, Kan.

Vice-President from West, Thomas J. Hartzell, Minneapoils, Minn.

Vice-President from East, Victor H. Jackson, New York City.

Vice-President from South, John H. London, Washington, D. C. Corresponding Secretary, Charles W. Rodgers, Dorchester, Mass.

Recording Secretary, Homer C. Brown, Columbus, O.

Treasurer, H. B. McFadden, Philadelphia, Pa.

Executive Committee, elected for three years, C. M. Works, Ottumwa, Iowa; W. G. Mason, Tampa, Fla.; Victor H. Jackson, New York City.

Executive Council, H. J. Burkart, Batavia, N. Y.; Charles Mc-Manus, Hartford, Conn.; Eugene R. Warner, Denver, Col.; B. Holly Smith, Baltimore, Md., and Thomas P. Hinman, Atlanta, Ga. Frank O. Hetrick and Homer C. Brown, *ex-officio* members.

Homer C. Brown, Recording Secretary.

185 East State Street, Columbus, Ohio.

Iowa State Board of Dental Examiners.

The next meeting of the Iowa State Board of Dental Examiners for the examination of candidates will be held in Des Moines, commencing December 9, 1912. For application blanks and particulars write J. A. West, Secretary, 417 Utica Building, Des Moines, Iowa.

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Obio State Dental Meeting.

The committees appointed to prepare for the holding of the 47th Annual Meeting of the Ohio State Dental Society at Cincinnati. December 3, 4 and 5, 1912, have been and are diligently carrying on their work.

The program as it stands at present is both unique and interesting: President Address, Dr. C. R. Converse Springfield.

Professional Ethics, Dr. H. C. Brown, Columbus.

Oral Surgery, Dr. J. V. I. Brown, Milwaukee, Wis.

Removable Bridge Work, Dr. Charles F. Ash, New York City.

Instrumentation in Pyorrhea Treatment, Dr. A. F. James, Chicago, Ill.

The Diagnosis of Diseases of the Pulp, Dr. Herman Prinz, St. Louis, Mo.

Lecture: Venereal Diseases, Illustrated by stereopticon and moving pictures from actual subjects, by A. E. Deeds, Dayton, Ohio.

This lecture has been prepared by the National Cash Register Co. at a cost of about \$15,000. The Medical Societies before which it has been presented pronounce it a wonderful exhibit. It is needless to call attention to the growing necessity for a thorough understanding of these diseases by the dental profession.

The local Oral Hygiene committee will give a practical exhibition of their school work by having a whole school at work at their own school building, under the direction of the Oral Hygiene Committee of the Cincinnati Society, giving every detail of the work from primary examinations up to operative work.

The practical working of all the latest phases of dental radiography will be demonstrated by Dr. Sidney Lange of Cincinnati. One of the most complete outfits will be set up and radiograms taken and developed and finished and delivered on the spot.

The Clinics will be very attractive.

The Hotel Sinton will be the headquarters.

Rhode Island Board of Registration.

The Rhode Island Board of Registration in Dentistry will meet for the examination of candidates at the State-House, Providence, R. I., Thursday, Friday and Saturday, December 26, 27 and 28, 1912.

Application blanks and particulars may be obtained from

H. L. GRANT, Secretary.

1025 Banigan Bldg., Providence, R. I.



Minneapolis Dental Society.

The annual midwinter meeting of the Minneapolis Dental Society will be held in the Masonic Temple, Minneapolis, Minn., on Friday and Saturday, January 24 and 25, 1913.

Space has already been reserved for even a larger manufacturers' exhibit than was given last year.

Clinics will be given by some of the best men in the profession, who will demonstrate all of the newest and most useful methods.

The entire meeting is to be conducted along unique and original lines—a new method of arranging the exhibits; also many other new things which will add to the pleasure and profit of each visitor.

For information address

O. DeForest Davis, Secretary.

404 Donaldson Building, Minneapolis, Minn.

Board of Dental Examiners of Arizona.

There will be a meeting of the Arizona Board of Dental Examiners on the 25-29th days of November, at Phoenix, Arizona.

Candidates should have their application, and fee of \$25.00 should accompany same, at least twenty days before meeting.

Theoretical examination includes the following subjects:—Anatomy, Physiology, Chemistry, Materiamedica, Therapeutics, Metallurgy, Histology, Pathology, Operative and Mechanical Dentistry, Oral Surgery, Practical Demonstration of Skill in Operative and Mechanical Dentistry will also be required and candidates should come prepared with instruments and material for making fillings and crowns in the mouth.

W. A. BAKER, Secretary & Treas.

Tucson, Ariz.

Wisconsin State Board of Dental Examiners.

The Wisconsin State Board of Dental Examiners will convene in Milwaukee at the Wisconsin College of Physicians and Surgeons, on Tuesday, December 17, 1912, at 10 A. M., for examination of applicants to practice in Wisconsin.

High school diploma, application and \$25 fee must be filed with the secretary fifteen days prior to above date. Dental diploma to be presented in advance of examination.

W. T. HARDY, Secretary.

422 Jefferson St., Milwaukee, Wis.

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Pennsylvania Board of Dental Examiners.

The next regular examination of the Pennsylvania Board of Dental Examiners will be held in the Musical Fund Hall, Philadelphia, and Dental Hall, University of Pittsburgh, on Wednesday, Thursday, Friday and Saturday, December 11, 12, 13 and 14, 1912. Application blanks can be secured from the Department of Public Instruction, Harrisburg.

Alexander H. Reynolds, Secretary.

4630 Chester Avenue, Philadelphia.

New Jersey State Board of Dental Examiners.

The New Jersey State Board of Dental Examiners will hold its regular annual meeting and examination in the Assembly Chamber of the State House, Trenton, N. J., December 2, 3 and 4, 1912. Applications must be filed ten days prior to the meeting. For further particulars apply to the secretary,

CHARLES A. MEEKER, D. D. S.,

29 Fulton St., Newark, N. J.

Michigan State Board of Dental Examiners.

The next regular meeting of the Michigan State Board of Dental Examiners will be held at the Dental College, Ann Arbor, commencing Monday, November 11, at 8 A. M., and continuing through the 16th. For application blanks and full particulars address

F. E. SHARP, Secretary.

Port Huron, Mich.

